

# TMS2008

137th Annual Meeting & Exhibition

**Linking Science and Technology  
for Global Solutions**



## Exhibition Directory

### Exhibition Hours

Monday • noon to 6 p.m.  
Tuesday • 9:30 a.m. to 5:30 p.m.  
Wednesday • 9:30 a.m. to 3 p.m.

### Special Events

**Grand Opening Reception** • Monday • 5 to 6 p.m.  
Enjoy complimentary food and drinks!

**Lunch** • Tuesday or Wednesday • noon to 2 p.m.  
Use your discount lunch coupons, compliments of Fluor Corporation!

**Attendee Snack** • Wednesday • 12:15 to 2 p.m.  
Bring your coupon and receive a snack, compliments of Elsevier Ltd.

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## Advanced Processing

ABB Analytical  
ALTECH SMV Ltd.  
ASM International  
AUMUND Fördertechnik GmbH  
Boreal Laser  
CANMET – Natural Resources Canada  
C.A. Picard Intl.  
Cytec Industries Inc.  
FLSmidth Minerals  
Hertwich Engineering  
Innovatherm GmbH+Co.KG  
K-Tek International  
Mercury Computer Systems  
Metallurg Aluminium  
Novelis  
Rio Tinto Alcan  
Ross Controls  
Sefar Filtration Inc.  
The Green Anode Expert

## Aluminum

ABB Analytical  
Almeq Norway AS  
ALTECH SMV Ltd.  
Aluminium International Today  
Aluminium Times  
Aluminum Corporation of China  
AUMUND Fördertechnik GmbH  
B&P Process Equipment Systems LLC  
Blasch Precision Ceramics  
Bloom Engineering Co. Inc.  
Brochot  
Burner Dynamics, Inc.  
Buss ChemTech AG  
Claudius Peters Projects GmbH  
CMI Novacast, Inc.  
Colt International  
Diatomovy Kombinat Ltd.  
ECL  
Erico Inc.  
Fives Solios  
FLSmidth Minerals  
Gautschi (Maerz-Gautschi)  
GE Water & Process Technologies  
Gillespie & Powers, Inc.  
Gouda Vuurvast N.V.  
Graphite Machining Inc.  
Heggset Engineering AS  
HMR Group AS  
Hencor BV  
Hertwich Engineering  
IMPEC AS  
Intergraphite  
JMat Pro

Karrena Refractory, LLC  
KB Alloys, Inc.  
Kempe Group of Companies  
K-Tek International  
KT Grant, Inc.  
LAEIS GmbH  
Life Cycle Engineering  
Light Metal Age Magazine  
MECFOR Inc.  
Mechatherm International Ltd.  
Metallurg Aluminium  
Metallurgical Society of CIM (MetSoc)  
Morgan AM&T (National Electrical Carbon)  
Murlin Chemical Inc.  
Nalco Company  
NKM Noell Special Cranes GmbH  
North American Manufacturing Company  
Novelis  
Pyrotek Inc.  
Riedhammer GmbH  
Rio Tinto Alcan  
Sefar Filtration Inc.  
SELEE Corporation  
SenTech Precimeter Inc.  
Sente Software  
Shenzhen Aida Aluminum Alloys Co. Ltd.  
STAS  
Stellar Materials Inc.  
The Green Anode Expert  
Thermcon Ovens BV  
Thermo-Calc Software Inc  
Thermo Scientific NITON Analyzers  
Thermo Scientific – Scientific Instruments  
Thorpe Technologies Inc.  
Tri-State Refractories  
Vulcan Refractories, Ltd.  
Weir Minerals Netherlands BV  
York Linings International Inc.

## Aqueous Processing

FLSmidth Minerals  
N.A. Water Systems

## Ceramics

Blasch Precision Ceramics  
CANMET – Natural Resources Canada  
Ceradyne, Inc.  
CNBM International Corporation  
Diatomovy Kombinat Ltd.  
Gouda Vuurvast N.V.  
Industries 3R Inc.  
Intergraphite  
Kabert Industries, Inc.  
Karrena Refractory, LLC  
LAEIS GmbH

MINTEQ International Inc.  
Morgan AM&T (National Electrical Carbon)  
Murlin Chemical Inc.  
North American Manufacturing Company  
Olympus Micro-Imaging Division  
Resco Products  
Rex Materials Group  
SELEE Corporation  
Stellar Materials Inc.  
Taylor & Francis Group/CRC Press  
Thermal Ceramics  
Vulcan Refractories, Ltd.  
Wahl Refractories  
York Linings International Inc.  
Zircar Ceramics, Inc.

## Characterization

Buehler Ltd.  
CANMET – Natural Resources Canada  
CSM Instruments  
EBSD Analytical Inc.  
EDAX Inc.  
Elsevier  
FEI Company  
Hysitron  
JEOL USA, Inc.  
Micro Materials Ltd.  
Taylor & Francis Group/CRC Press  
Thermo Scientific – Scientific Instruments

## Composites

CANMET – Natural Resources Canada  
CNBM International Corporation  
Elsevier  
Graphite Machining Inc.  
Industries 3R Inc.  
Morgan AM&T (National Electrical Carbon)  
Phoenix|x-ray Systems & Services  
Shimadzu Scientific Instruments, Inc.  
Wahl Refractories

## Computer Applications and Process Control

ALTECH SMV Ltd.  
Boreal Laser  
CompuTherm LLC  
ECL  
IMPEC AS  
Innovatherm GmbH+Co.KG  
Mechatherm International Ltd.  
Mercury Computer Systems  
Novelis  
Phoenix|x-ray Systems & Services  
Rio Tinto Alcan  
SenTech Precimeter Inc.

## Copper, Nickel and Cobalt

Aluminum Corporation of China  
Intergraphite  
KT Grant, Inc.  
Metallurgical Society of CIM (MetSoc)  
Murlin Chemical Inc.  
North American Manufacturing Company  
SenTech Precimeter Inc.  
Thermo-Calc Software Inc.  
Vulcan Refractories, Ltd.  
Weir Minerals Netherlands BV

## Electrometallurgy

Tri-State Refractories

## Electronic Materials

Ceradyne, Inc.  
Olympus Micro-Imaging Division  
Phoenix|x-ray Systems & Services

## Environmental Effects

Boreal Laser  
Dantherm Filtration, Inc.  
GE Water & Process Technologies  
Fives Solios  
N.A. Water Systems  
Opsis AB  
Ross Controls  
The Green Anode Expert  
Thermal Ceramics  
Weir Minerals Netherlands BV

## Environmental Issues

ALTECH SMV Ltd.  
Aluminium International Today  
AUMUND Fördertechnik GmbH  
Bloom Engineering Co. Inc.  
Boreal Laser  
Burner Dynamics, Inc.  
Buss ChemTech AG  
Dantherm Filtration, Inc.  
ECL  
Gautschi (Maerz-Gautschi)  
GE Water & Process Technologies  
Innovatherm GmbH+Co.KG  
JEOL USA, Inc.  
Mechatherm International Ltd.  
Metallurgical Society of CIM (MetSoc)  
Nalco Company  
N.A. Water Systems  
North American Manufacturing Company  
Opsis AB  
Ross Controls

## Experimental Methods

Boreal Laser  
Maruzen International Co., Ltd.  
Micro Materials Ltd.  
Thermo Scientific – Scientific Instruments

## Extraction and Processing

Aluminium International Today  
Aluminum Corporation of China  
B&P Process Equipment Systems LLC  
Buss ChemTech AG  
C.A. Picard Intl.  
Dantherm Filtration, Inc.  
FLSmith Minerals  
Nalco Company  
Rio Tinto Alcan  
Sefar Filtration Inc.  
Starcyl Cylinders/MAC  
Weir Minerals Netherlands BV

## Fundamentals

CompuTherm LLC  
Taylor & Francis Group/CRC Press

## High-Temperature Materials

ASM International  
Blasch Precision Ceramics  
Ceradyne, Inc.  
CompuTherm LLC  
Darco Southern  
Diatomov  
Gouda Vuurvast N.V.  
Graphite Engineering & Sales  
Graphite Machining, Inc.  
Industries 3R Inc.  
Intergraphite  
Jayne Industries  
Kabert Industries, Inc.  
Micro Materials Ltd.  
Mid-Mountain Materials Inc.  
Morgan AM&T (National Electrical Carbon)  
Parker Hannifin  
Pyrotek Inc.  
Resco Products Inc.  
Rex Materials Group  
Stellar Materials Inc.  
Thermal Ceramics  
Tri-State Refractories  
Urja Products PVT. Limited  
Vulcan Refractories, Ltd.  
Wahl Refractories  
Zircar Ceramics, Inc.

## Iron and Steel

ASM International  
AUMUND Fördertechnik GmbH  
Buehler Ltd.  
Burner Dynamics, Inc.  
CANMET – Natural Resources Canada  
Fluor  
Gautschi (Maerz-Gautschi)  
Jayne Industries  
JMat Pro  
KT Grant, Inc.  
Life Cycle Engineering  
Maruzen International Co. Ltd.  
Metallurgical Society of CIM (MetSoc)  
North American Manufacturing Company  
ProQuest  
Pyrotek Inc.  
SELEE Corporation  
Sente Software  
Shimadzu Scientific Instruments, Inc.  
Thermo-Calc Software Inc.  
Thermo Scientific – Scientific Instruments  
Thorpe Technologies, Inc.  
Wahl Refractories  
York Linings International, Inc.

## Joining

Erico Inc.  
Industries 3R Inc.

## Lead, Zinc and Tin

CMI Novacast, Inc.  
Rigaku  
Thermo Scientific NITON Analyzers  
Thorpe Technologies Inc.  
Weir Minerals Netherlands BV

## Lightweight Materials

Aluminum Corporation of China  
CANMET – Natural Resources Canada  
Ceradyne, Inc.  
CNBM International Corporation  
CompuTherm LLC  
International Magnesium Association  
Maruzen International Co. Ltd.  
Pyrotek Inc.  
Thermal Ceramics  
Zircar Ceramics, Inc.

## Manufacturing and Markets

Advanced Dynamics Corporation, Ltd.  
Almeq Norway AS  
Aluminium International Today  
Blasch Precision Ceramics

Bloom Engineering Co. Inc.  
Buss ChemTech AG  
C.A. Picard Intl.  
Claudius Peters Projects GmbH  
CNBM International Corporation  
Dantherm Filtration, Inc.  
Elsevier  
Erico Inc.  
Gouda Vuurvast N.V.  
Hencon BV  
iCrane Systems Inc.  
IMPEC AS  
Industries 3R Inc.  
Innovatherm GmbH+Co.KG  
KB Alloys, Inc.  
K-Tek International  
Life Cycle Engineering  
Light Metal Age Magazine  
L.P. Royer Inc.  
MECFOR Inc.  
Metallurg Aluminium  
NKM Noell Special Cranes GmbH  
Novelis  
Olympus Micro-Imaging Division  
Opsis AB  
Parker Hannifin  
Pyrotek Inc.  
Ross Controls  
Starcyl Cylinders/MAC  
STAS  
Thermal Ceramics  
Thermo Scientific NITON Analyzers  
Thorpe Technologies Inc.  
Webb Aluminium Group  
Zircar Ceramics, Inc.

## **Mechanical Properties**

Aluminium International Today  
ASM International  
CANMET – Natural Resources Canada  
CSM Instruments  
Elsevier  
Hysitron  
IMPEC AS  
JMat Pro  
Micro Materials Ltd.  
Sente Software  
Shimadzu Scientific Instruments, Inc.  
Wahl Refractories

## **Minerals**

Aluminum Corporation of China  
AUMUND Fördertechnik GmbH  
Claudius Peters Projects GmbH  
Cytec Industries Inc.

Elsevier  
FLSmidth Minerals  
Fluor  
MINTEQ International Inc.  
Nalco Company  
ProQuest  
Rigaku  
Sefar Filtration Inc.

## **Modeling and Simulation**

CompuTherm LLC  
JMat Pro  
Mercury Computer Systems  
Rio Tinto Alcan  
SenTech Precimeter Inc.  
Sente Software  
Thermo-Calc Software Inc.

## **Molten Metal and Solidification**

Bloom Engineering Co. Inc.  
Burner Dynamics, Inc.  
Claudius Peters Projects GmbH  
CMI Novacast, Inc.  
Erico Inc.  
Gautschi (Maerz-Gautschi)  
GE Water & Process Technologies  
Graphite Machining, Inc.  
Hertwich Engineering  
Kabert Industries, Inc.  
Mechatherm International Ltd.  
Metallurg Aluminium  
Morgan AM&T (National Electrical Carbon)  
Murlin Chemical Inc.  
Novelis  
ProQuest  
STAS  
Thermcon Ovens BV

## **Nanotechnology**

Carl Zeiss SMT  
CSM Instruments  
FEI Company  
Hysitron  
JEOL USA, Inc.  
Olympus Micro-Imaging Division  
Phoenix|x-ray Systems & Services  
Rigaku  
Taylor & Francis Group/CRC Press  
Thermo Scientific – Scientific Instruments

## **Nuclear Materials**

Shenzhen Aida Aluminum Alloys Co. Ltd.

## Other Nonferrous

Aleastur  
Aluminum Corporation of China  
Blasch Precision Ceramics  
Brochot SA  
Buss ChemTech AG  
Cytec Industries Inc.  
Gouda Vuurvast N.V.  
International Magnesium Association  
KB Alloys, Inc.  
KT Grant, Inc.  
Light Metal Age Magazine  
SenTech Precimeter Inc.  
Stellar Materials Inc.  
Wahl Refractories

## Physical Properties

Ceradyne, Inc.  
Hysitron  
JEOL USA, Inc.  
Maruzen International Co., Ltd.  
Rigaku  
Shimadzu Scientific Instruments, Inc.  
Thermo-Calc Software Inc.

## Polymers

CSM Instruments  
Cytec Industries Inc.  
Micro Materials Ltd.  
Nalco Company  
Phoenix|x-ray Systems & Services  
Shimadzu Scientific Instruments, Inc.  
Taylor & Francis Group/CRC Press

## Powder Technology

B&P Process Equipment Systems LLC  
Blasch Precision Ceramics  
C.A. Picard Intl.  
Claudius Peters Projects GmbH  
LAEIS GmbH  
Morgan AM&T (National Electrical Carbon)  
Olympus Micro-Imaging Division  
Rigaku  
Sefar Filtration Inc.

## Precious Metals

Graphite Machining, Inc.  
Maruzen International Co. Ltd.  
Olympus Micro-Imaging Division  
Rigaku  
Thermo Scientific NITON Analyzers  
Wahl Refractories

## Process Mineralogy

Cytec Industries Inc.

## Pyrometallurgy

Metallurgical Society of CIM (MetSoc)

## Recycling and Secondary Recovering

Aluminum Corporation of China  
Bloom Engineering Co. Inc.  
Burner Dynamics, Inc.  
Dantherm Filtration, Inc.  
Gautschi (Maerz-Gautschi)  
Gillespie & Powers, Inc.  
Hencon BV  
Hertwich Engineering  
Light Metal Age Magazine  
MECFOR Inc.  
Mechatherm International Ltd.  
STAS  
Thermcon Ovens BV  
Thermo Scientific NITON Analyzers  
Thorpe Technologies Inc.  
Urja Products PVT. Limited  
Wahl Refractories

## Shaping and Forming

Jayne Industries  
LAEIS GmbH  
Parker Hannifin  
Stellar Materials Inc.  
Thorpe Technologies Inc.  
Zircar Ceramics, Inc.

## Surface Modification and Coating

ASM International  
Buehler Ltd.  
CSM Instruments  
Hysitron  
Murlin Chemical, Inc.  
Novelis  
Olympus Micro-Imaging Division

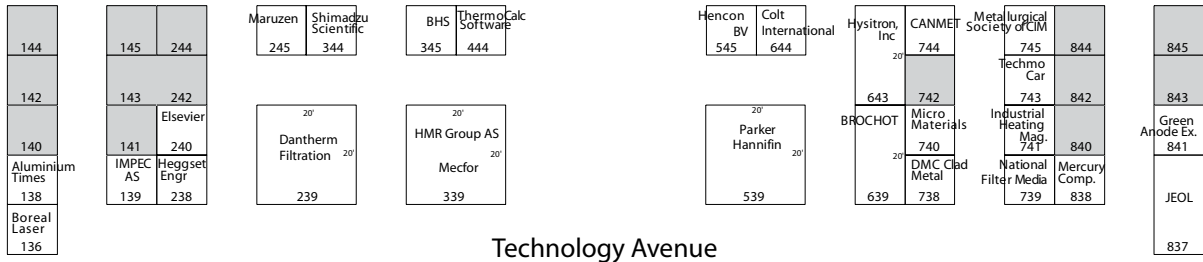
## Synthesis and Processing

Laeis GmbH  
Ross Controls

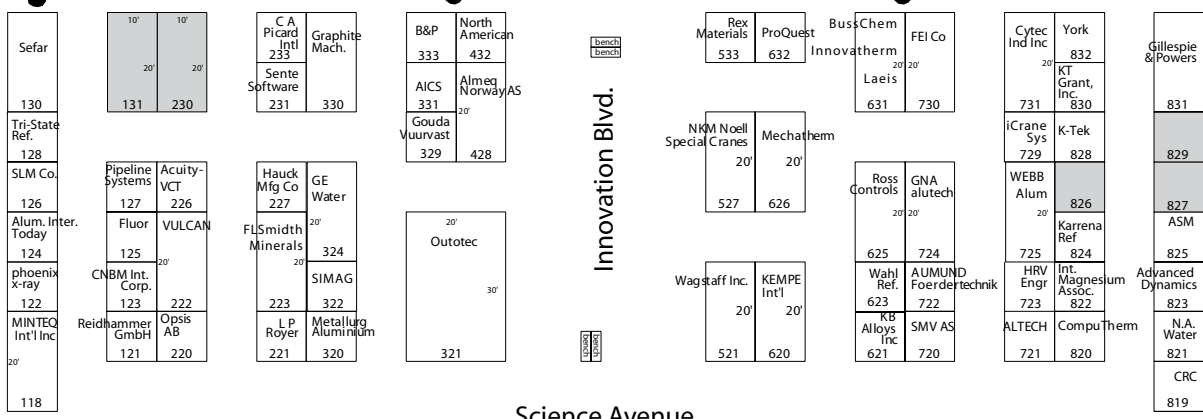
## Titanium

International Titanium Association  
JMat Pro  
Light Metal Age Magazine  
Metallurg Aluminium  
SELEE Corporation  
Thermo Scientific NITON Analyzers  
Thermo Scientific – Scientific Instruments  
Thorpe Technologies Inc.  
Wahl Refractories

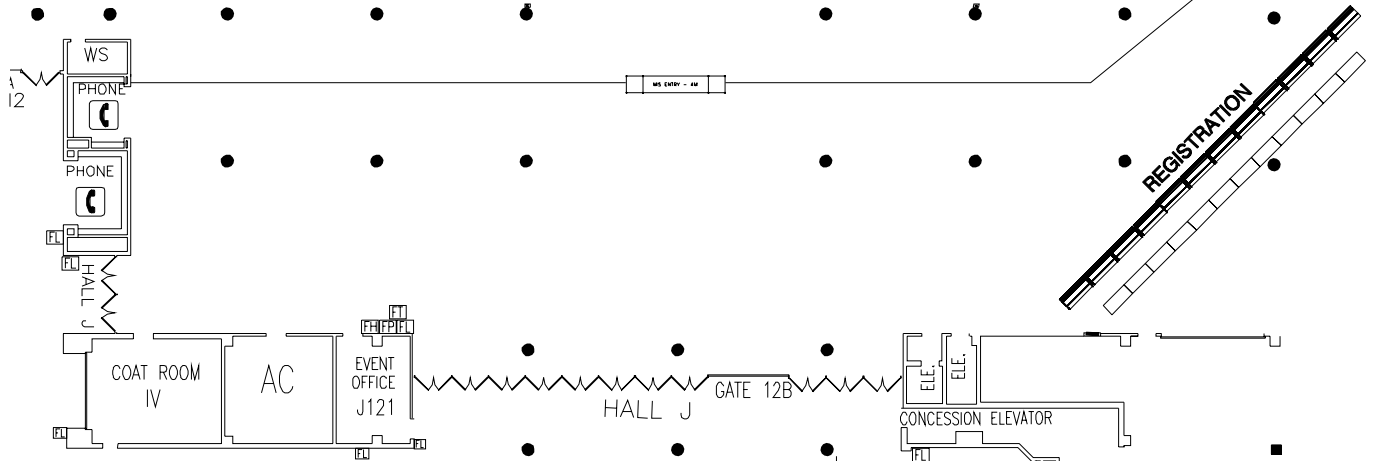
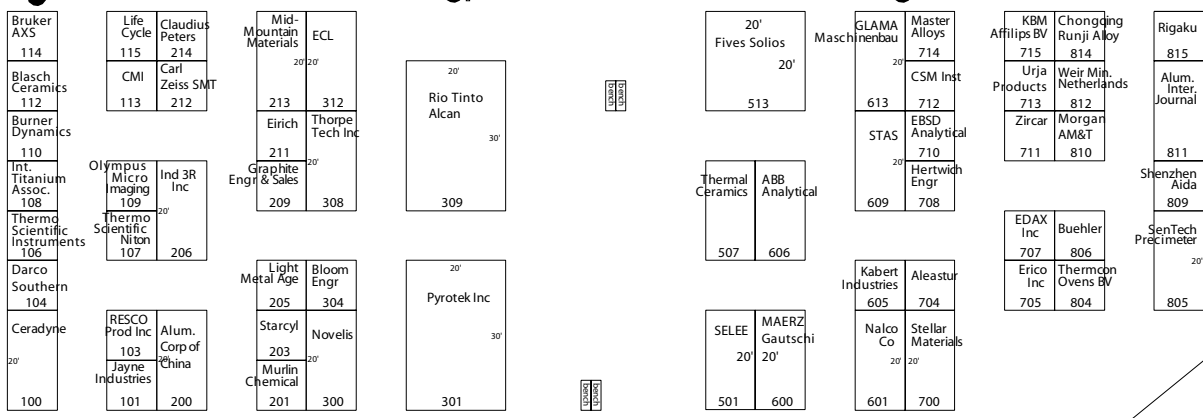




## Technology Avenue



## Science Avenue



LAST REVISION  
2/07/2008

## **ABB Analytical**

See our ad on the back cover!

#606

Quebec City, Canada

[www.abb.com/analytical](http://www.abb.com/analytical)

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB group of companies operates in more than 100 countries and employs about 115,000 people. ABB's Analytical and Advanced Solutions business unit designs, manufactures and markets high-performance analytical system solutions and spectroradiometers for petroleum, chemical, life science, metallurgy and remote sensing/aerospace markets. Building on its 30 years of experience in analytical instrumentation, the company, through a dedicated team of engineers, offers you the best solutions with its complete range of reliable analytical instruments for inclusions and dissolved hydrogen measurement: AISCAN, LiMCA II, Prefil®-Footprinter, PoDFA and Metallographic Analysis Service.

## **Acuity VCT (formerly Benchmark Automation)**

#226

Cleveland, Ohio

[www.benchmarkautomation.com](http://www.benchmarkautomation.com)

Acuity-VCT will exhibit the newest version of the Video Capture System (VCS). Installed in many manufacturing plants throughout North America, the VCS has generated significant savings by increasing production, improving quality and decreasing maintenance costs. The VCS, designed from the latest technologies, is an advanced Visual Troubleshooting tool. Please stop by our booth for a demonstration how the VCS can make your facility more efficient.

## **Advanced Dynamics Corporation, Ltd.**

#823

St. Bruno, Canada

[www.advanceddynamics.com](http://www.advanceddynamics.com)

For over four decades, ADCL has supplied our global customer base with state-of-the-art material handling systems for carbon plants and cast houses. Aluminum smelting technology includes fully automated turn-key projects for anode handling and cleaning, ingot handling, sawing and packaging. Other metals experience includes specialty systems for the magnesium, copper, zinc, steel and lead industries. ADCL is a one stop shop for your automated material handling needs including mechanical and controls engineering, fabrication, assembly, test and commissioning. Whether you need a new system or upgrades to existing systems or simply individual pieces of equipment, we can help improve your company's productivity.

## **Aleastur**

#704

Aviles Asturias, Spain

[www.aleastur.com](http://www.aleastur.com)

Founded in the 1980s, Aleastur manufactures a range of grain refiners and master alloys for the aluminum industry. Aleastur concentrates mainly in the production of AlTiB alloys in rod. In 2003 Aleastur established Aleastur of America LLC with offices and a central warehouse in Evansville, Indiana, to meet the growing demands of the Canadian and U.S. markets and to demonstrate our commitment by providing enhanced service for products. Aleastur of America LLC maintains local warehousing stock of aluminum grain refiners, master alloys and hardeners (tablets and briquettes) for primary and secondary aluminum smelters, integrated extruders and foundries. Canadian and U.S. sales functions are managed by Aleastur of America LLC having selected distribution points with strategically located warehouses throughout both countries.

## **Almeq Norway AS**

#428

Langhus, Norway

[www.almeq.com](http://www.almeq.com)

Almeq Norway AS is an engineering, marketing and production company for a wide range of equipment to the aluminum industry, in particular for smelters and foundries. The company is a leading supplier of its designed equipment as well as an export and marketing partner for other well accepted suppliers. Among machinery engineered and produced in Norway are crucible and tube cleaners, pot-liners and various electric drying and preheating systems. In cooperation with partners in Norway and abroad, Almeq delivers anode and metal transporters, and various potroom equipment.

## **ALTECH SMV Ltd.**

#721

IS-201 Kópavogur, Iceland

[www.altech.is](http://www.altech.is)

ALTECH will present some new equipment and systems for the primary aluminum industry for improved environment, efficiency and economy. Mainly special equipment for anode rod-ding shops such as: automatic Stub Straightening Press, Rod Straightening Press, Sub Equalizing Machine, Sub Sawing and Welding Machines, Thimble Removal Press, Stub Protection System, Semi-automatic Casting Machine, Electric Heaters for heating of ladles, stubs and anode holes, Stub Graphite Coating Machine with dry graphite paste, Rod Plane and Brush Machine and the ALTRACK anode and rod coding and tracking system. For cast house: Automatic Metal Skimmer for metal transport crucibles and Electric Crucible Heater. For cathode service shops: Electric Cathode Heaters and Cathode Assembly Lines.

## Aluminium International Today

#124

Redhill Surrey, United Kingdom

[www.aluminiumtoday.com](http://www.aluminiumtoday.com)

Aluminium International Today is the aluminum industry's leading international publication reporting on aluminum production and processing worldwide. Founded in 1989, the journal has consistently provided a wealth of technical features aimed at equipping producers and processors with information on the latest developments. Added to this is a regular digest of industry news, contracts, events, new technology, produce reviews, and conference reports. Supported by the Aluminium Federation in the U.K., Aluminium International Today publishes six times a year in English plus three Chinese language issues and two Russian language issues. It is the main sponsoring publication for the ALUMINIUM series of exhibitions and conferences in Germany, USA, China and India. Truly, the professionals' choice! Aluminium International Today is a subscription magazine. For a specimen sample visit [www.aluminiumtoday.com](http://www.aluminiumtoday.com) and click on the cover image.

## Aluminium Times

#138

Shoreham by Sea, West Sussex UK

[www.mmcpublishings.co.uk](http://www.mmcpublishings.co.uk)

Aluminium Times, published five times a year. Each issue is posted to 5,000 companies involved in the world-wide primary and secondary production of aluminum, rolling mills and extruders plus other large aluminum fabricators. Aluminium Times is circulated free of charge to managers involved in the purchasing chain of plant, equipment and consumables. Publisher of the world aluminum industry maps and directories which feature primary smelters, rolling mills and extruders. Aluminium Times is organizing a conference and exhibition 'Alcathouse' at Aachen, Germany from 2-3 December 2008.

## Aluminum Corporation of China

#200

Beijing, P.R. China

[www.chalco.com.cn](http://www.chalco.com.cn)

Aluminum Corporation of China (Chinalco) is an international mining and diversified metals company and is under the direct leadership of China's Central Government. Aluminum Corporation of China Limited (Chalco) is share-controlled by Chinalco and listed on New York, Hong Kong and Shanghai stock exchanges. It is the PRC's largest and the world's second largest alumina producer, as well as the largest producer of primary aluminum in the PRC. Ranging from mining, alumina refining, aluminum smelting and fabrication as well as other nonferrous metals as copper and rare metals, Chinalco and Chalco boast in their outstanding management and aim to be a sustainable and leading company in non-ferrous metals industry.

## ASM International

#825

Materials Park, Ohio

[www.asminternational.org](http://www.asminternational.org)

"Everything is Material" at ASM International, The Materials Information Society—from traditional processes like heat treating to new materials related advances in medical devices, fuel cells, nanomaterials and MEMS. ASM provides the world's most trusted reference collection on materials data, including ASM Handbooks Online, ASM Alloy Center and the Alloy Phase Diagram Center Online. ASM has also a strong and growing membership comprised of more than 36,000 materials scientists and engineers worldwide. For more information about how ASM provides technical knowledge, education, networking and professional development to serve the materials science and engineering profession, visit [www.asminternational.org](http://www.asminternational.org) or contact Denise Smith, [denise.smith@asminternational.org](mailto:denise.smith@asminternational.org).

## AUMUND Födertechnik GmbH

#722

5911 KJ Venlo, The Netherlands

[www.aumund.de](http://www.aumund.de)

The AUMUND Group is a worldwide leader and specialist in the design, manufacture and supply of material handling equipment and systems. At TMS 2008, AUMUND Födertechnik will present their solutions for transport and defined cooling of hot bath material; conveying and cooling in foundries; conveying, storing, blending of coal, iron ore, limestone; pan conveyors for pellets, DRI, HCl, sinter; cooling conveyors in inert atmosphere. We welcome you to visit our booth at TMS 2008 in New Orleans.

## B&P Process Equipment Systems LLC

See our ad on page 8 of JOM!

#333

Saginaw, Michigan

[www.bpprocess.com](http://www.bpprocess.com)

B&P Process Equipment (manufacturers of Baker Perkins machinery) is a supplier of specialized process equipment for the production of carbon paste, energetic materials, plastics, industrial chemicals, and for chemical separation. Many built since the 1930s are still in service. In 1952, the aluminum industry production requirements grew, and the Continuous Kneader became the preferred method of manufacturing carbon paste. Today, our batch mixers and continuous kneaders are used worldwide in the production of carbon paste. B&P also offers a complete line of continuous pusher centrifuges for liquid/solid separation. B&P also has a joint venture with Battaglion S.R.L., headquartered in Bergamo, Italy, for a broad line of mixing equipment.

## **BHS Marketing/Western Briquette**

See our ad on page 14 of *JOM!*

#345

Salt Lake City, Utah

[www.bhsmarketing.com](http://www.bhsmarketing.com)

BHS Marketing is a producer of soda ash briquettes for the aluminum industry with safety as our main concern. The briquettes reduce the mini-explosions experienced with powder soda ash in the reduction potlines as well as reducing the Ph levels. Reducing the potential of your employees getting burned with molten aluminum is a key factor for the briquettes. Better utilization is experienced when using the soda ash briquettes. Consumption levels of the powder is reduced 20–40%, when switching over to the briquettes.

## **Blasch Precision Ceramics**

#112

Albany, New York

[www.blaschceramics.com](http://www.blaschceramics.com)

Founded in 1979, Blasch Precision Ceramics manufactures complex refractory shapes via a patented injection molding process. Parts manufactured using this proprietary process have unique qualities that offer distinct advantages such as precise tolerances without machining ( $\pm 0.5\%$ ), excellent thermal shock resistance, controlled porosity, sub-particle distribution control, and outstanding resistance to spalling, erosion and metal penetration. Parts intended for aluminum applications are treated with a proprietary nonwetting agent. Whether you need low pressure stalk tubes, rotary degassers, thermocouple protection tubes, porous plugs or immersion heater tubes, Blasch can deliver. Our dedicated engineers are available to develop materials and design parts that satisfy customer needs.

## **Bloom Engineering Co. Inc.**

See our ad on page 8 of *JOM!*

#304

Pittsburgh, Pennsylvania

[www.bloomeng.com](http://www.bloomeng.com)

Bloom Engineering, a global combustion company, specializes in problem solving through custom engineering. Product lines include low NOx burner designs, combustion pipe train components and control systems. Bloom Engineering optimizes the burner combustion pattern required for the application. Burner designs are based on extensive experience obtained in the ferrous and nonferrous industries, development laboratory tests, and computational fluid dynamics design techniques.

## **Boreal Laser**

#136

Spruce Grove, AB Canada

[www.boreal-laser.com](http://www.boreal-laser.com)

Boreal Laser of Canada is the leading supplier of HF monitors for environmental and process control in primary aluminum smelters worldwide. Boreal's GasFinder2 and GasFinderFC portable systems are used for HF emissions reductions studies and pot line roof monitoring. GasFinderMC is a fixed, multiple channel system that monitors multiple openpaths and/or ducts or stacks at the same time. Primary benefits of the GasFinder technology are self-calibration, robustness, ease-of-use and industry-leading technical support. In the past six years, more than 120 GasFinder HF monitoring systems have been installed in over 35 smelters in 25 countries worldwide.

## **Brochot**

#639

Tremblay, France

[www.brochot.fr](http://www.brochot.fr)

Activities in the light metal industries: BROCHOT designs, manufactures, carries out installation, provides after sales services and spare parts of special machines; complete plants. We also provide full turnkey solutions and integrated process solutions. With our three departments—BROCHOT, SYPRIM, BERGER—we propose the full range of equipment necessary for aluminum and magnesium smelters. BROCHOT is a world leader with: potrooms—electric pot ramming machines, dross crucible skimming equipment (Ekumax), dross handling equipment (Ekumax); cast house—ingot casting and stacking lines, high throughput dross free ingot casting wheel; foundry—we resolve your nightmarish problems with our revolutionary process—full workshop supply or single pieces of equipment delivery among which we have developed a vacuum pressure pouring technology.

## **Bruker AXS**

See our ad on page 17 of *JOM!*

#114

Madison, Wisconsin

[www.bruker-axs.com](http://www.bruker-axs.com)

Bruker AXS specializes in high-end x-ray diffraction (XRD) and fluorescence (XRF) solutions to perform applications in materials analysis. Our technology is used to investigate complex samples ranging from wafers, thin films, powders to amorphous materials. We are the market leader in XRD, offering the largest, highest quality portfolio of cutting edge diffraction components and software, including the D8 Advance, D8 Discover, D8 Discover w/GADDS, Super Speed Solutions, Multex, Leptos and Topas.

## **Buehler Ltd.**

**#806**

**Lake Bluff, Illinois**

**[www.buehler.com](http://www.buehler.com)**

For over half a century, Buehler has been the leading manufacturer of scientific instruments and supplies for cross-sectional analysis. Buehler products are used throughout the world by metallurgical laboratories, quality control departments and failure analysis facilities for the analysis of all types of materials including ceramics, composites, semi-conductors, metals, rocks and minerals, and plastics. You can visit us in booth #806 or on our Web site at [www.buehler.com](http://www.buehler.com).

## **Burner Dynamics, Inc.**

*See our ad on page 4 of JOM!*

**#110**

**Birmingham, Alabama**

**[www.burnerdynamics.com](http://www.burnerdynamics.com)**

Burner Dynamics, Inc. designs and manufactures patented ultra-high efficiency, industrial gas burners that can be retrofitted into most applications with minimal impact to existing equipment and operations. Burner modifications have been successfully completed on burners sized from 2 MM BTU to 20 MMBTU in such industries as primary aluminum, secondary aluminum, aluminum extrusion, and steel and pipe facilities. You can visit us at booth #110 or on our web site at [www.burnerdynamics.com](http://www.burnerdynamics.com).

## **Buss ChemTech AG**

**#631**

**Pratteln 1, Switzerland**

**[www.buss-ct.com](http://www.buss-ct.com)**

Buss ChemTech AG is a Swiss based engineering company offering technology to the primary aluminum producers by providing complete solutions from metering of the raw materials to forming of the green anodes. The key equipment is the proprietary Buss Kneader for mixing of the green anode paste. Over the last 50 years some 250 units have been supplied and most of them are still in full operation. This means that more than 50% of the world's primary aluminum is made with anodes that are based on the highly accepted "High Shear Buss Kneader Technology" of Buss ChemTech AG. For more information please contact us directly or see us at our booth No. 631 at the TMS 2008. We are pleased to support you.

## **CANMET – Natural Resources Canada**

**#744**

**Ottawa, Canada**

**[www.nrcan-rncan.gc.ca/com](http://www.nrcan-rncan.gc.ca/com)**

The CANMET Materials Technology Laboratory (CANMET-MTL) develops and deploys technologies that improve all aspects of producing and using materials and products derived from metals and materials. CANMET-MTL, a research institute of the Government of Canada, is unique in having start-to-finish capability covering the complete materials cycle from materials selection, fabrication and characterization to prototype product fabrication. Research focuses on materials used by the transportation industry (particularly the manufactures of vehicles, parts, and components), and those elements of the energy industry associated with the use of pipelines to transport oil and gas and materials for next-generation nuclear reactors.

## **C.A. Picard Intl.**

**#233**

**Remscheid, Germany**

**[www.capicard.com](http://www.capicard.com)**

Carl Aug Picard International specializes in the manufacture of high quality wear parts for continuous kneaders for the manufacture of green anodes for the primary aluminum industry. Picard manufactures kneading teeth, wearing plates/liners and screw flights out of different, highly wear-resistant qualities.

## **Carl Zeiss SMT**

**#212**

**Thornwood, New York**

**[www.smt.zeiss.com](http://www.smt.zeiss.com)**

Visit Zeiss' booth to experience the new Axio Imager upright digital microscope for routine and research. Highest optical performance is combined with maximum stability, exceptional ergonomics, and integrated intelligence for enhanced operating comfort. Also shown: Axiovert 200 MAT inverted high performance metallograph with brilliant optics, enhanced ergonomics, innovative optical techniques, unshakable stability and ease of use; LSM 5 PAS-CAL laser confocal system for surface topography and roughness measurement as well as the new AxioVision 4.3 imaging software for grain size analysis, nodule evaluation/identification, multi-phase analysis and measurement of dendritic arm spacing.

## **Ceradyne, Inc.**

**#100**

**Costa Mesa, California**

**[www.ceradyne.com](http://www.ceradyne.com)**

Ceradyne, Inc. manufactures advanced technical ceramics for industrial, defense, automotive, and medical applications. Properties include light weight, thermal shock resistance, wear resistance, electrical insulating, and chemical inertness. ESK Ceramics, a Ceradyne subsidiary, is a world renown supplier of carbide, boride, and nitride materials and engineered ceramic components for severe environments.

## **Chongqing Runji Alloy Co. Ltd.**

**#814**

**Chongqing, P.R. China**

**[www.runjico.com](http://www.runjico.com)**

We specialize in producing all kinds of alloying tablets. Our production capacity is 30,000MT which is the largest in the world. We have our own manganese metal sources; state-of-the-art production management, technology and facilities; advanced inspection machines. In addition, our silicon metal production capacity will be greatly expanded by the end of this year as our new plant launches, reaching 56,000 tpy. We can maintain very competitive prices and high quality. We are looking forward to our customers—old, new, and potential—to come to our booth during the exhibition!

## **Claudius Peters Projects GmbH**

**#214**

**Buxtehude, Lower Saxon Germany**

**[www.claudiuspeters.com](http://www.claudiuspeters.com)**

Claudius Peters Projects GmbH, is headquartered in Buxtehude, Germany, near Hamburg, with regional offices in the Americas, Europe, China and the Far East. Claudius Peters Projects offers technologies in the field of materials handling and processing, together with turnkey and semi-turnkey systems to a wide range of industries such as aluminum, cement, gypsum and other bulk industries and coal pulverizing and injection systems for the global steel industry. Claudius Peters Projects GmbH is a wholly owned subsidiary of Langley Holdings plc, a privately controlled U.K. engineering group.

## **CMI Novacast, Inc.**

**#113**

**Elk Grove Village, Illinois**

**[www.cminovacast.com](http://www.cminovacast.com)**

We specialize in electromagnetic pumps for non-turbulent, fully automated, metered molten metal delivery to your casting line. Our pumps have no moving parts which cause the turbulence of typical

pumps. Our PG-300 pump is utilized in gravity pouring lines where you can have minimal free fall of the molten metal into your molds. The pumps can be used for transfer and for the highest quality castings—our PG-450 pump is ideal for low pressure casting for aluminum and zinc, and will soon, magnesium casting capabilities.

## **CNBM International Corporation**

**#123**

**Beijing, China**

**[www.cnbm.com.cn](http://www.cnbm.com.cn)**

CNBM International Corporation is the international platform of CNBM (China National Building Material Group Corporation) which is one of the largest building material enterprises in China. Founded in the 1980s, CNBM international Corp. has been dedicated to thermal insulation and refractories for industrial applications. Series solutions to thermal insulation are available for customers across the world, with products like ceramic fiber products, calcium silicate products, insulating firebricks, high temperature textiles, etc., related to design. Now, we are ready to share our experience with customers all over the world.

## **Colt International**

**#644**

**Cujik, The Netherlands**

**[www.coltgroup.com](http://www.coltgroup.com)**

For 75 years Colt has been providing comfortable and safe working conditions in both industrial and commercial buildings. Colt's products and services are so designed that people can live and work within an environment where they feel safe and comfortable. Colt's services may include problem solving and advice, project management, and the design, supply, installation, commissioning and maintenance of systems. Colt is a global supplier and manufacturer of gravity and mechanical ventilation systems. The principal activity of Colt is the supply of specialist products and systems in the field of building services with particular emphasis on gravity ventilation

## CompuTherm LLC

See our ad on page 10 of *JOM!*

#820

Madison, Wisconsin

[www.computherm.com](http://www.computherm.com)

CompuTherm LLC, with expertise in thermodynamics and kinetics of multi-component alloys, was established in 1996. We provide software, databases and consulting services for industrial and academic uses. Pandat, a versatile software package for calculating phase diagrams and thermodynamic properties of multi-component systems, is well known for being reliable and user-friendly. No initial values are required for any type of complex calculation. Pandat, when integrating with the thermodynamic databases available at CompuTherm for nickel, titanium, iron, magnesium, aluminum, solder, and copper alloys, is a powerful tool in understanding the properties of a variety of advanced materials. It will save you time and cost in materials design and processing optimization.

## CSM Instruments

See our ad on page 3 of *JOM!*

#712

Needham, Massachusetts

[www.csm-instruments.com](http://www.csm-instruments.com)

CSM Instruments offers a wide range of instruments and testing services for surface mechanical properties characterization, including: Indentation Testers, Scratch Testers, and Tribometers of varying load ranges. 3D-imaging options are available with the ConScan or AFM objective. CSM manufactures standalone instruments as well as testing modules that can be combined together on an automated platform for a single instrument capable of multiple analysis modes. CSM Instruments is proud to announce the launch of its new Table Top Nano Indentation Tester (TTX), a cost-effective solution which meets the ISO 14577 & ASTM E2546 standards.

## Cytec Industries Inc.

See our ad on page 21 of *JOM!*

#731

West Patterson, New Jersey

[www.cytec.com](http://www.cytec.com)

Cytec's alumina processing chemicals team has delivered breakthrough products for our Bayer Process customers—and there's more to come. From our recently renovated technology center in Stamford, Connecticut, some of the best surface and polymer chemists in the business are overcoming challenges to meet our customers' expansion and profitability plans. We can help our customers improve yield or production throughput, often without capital expenditures. Cytec is a leader in the development of innovative solutions for the global alumina and mineral processing industry. What can Cytec do for you?

## Dantherm Filtration, Inc.

#239

Thomasville, North Carolina

[www.danthermfiltration.com](http://www.danthermfiltration.com)

Dantherm Filtration, Inc. specializes in designing and engineering complete turn-key dust, mist and fume collection systems, including: collectors, ducting, fans, spark detection equipment and more. We have over 35,000 installations worldwide and sell a complete line of expandable baghouse, cartridge, cyclone and canister style collectors ranging from 500 CFM to over 100,000 CFM.

## Darco Southern

#104

Independence, Virginia

[www.darcosouthern.com](http://www.darcosouthern.com)

Darco Southern is a manufacturer/fabricator of high temperature industrial textile gaskets. Tetraglas (1000°F), Vermiculited Tetraglas (1500°F) and Tetraglas 3000 (2300°F) can be fabricated in a wide range of tadpoles, ropes, heat shields, gaskets, and blankets. The Tetraglas family is heavily used in the aluminum, steel, petrochemical and power generation sectors.

## Diatomovy Kombinat Ltd.

#222

Ulyanovsk, Russia

[www.diatomit.com](http://www.diatomit.com)

Diatomovy Kombinat is one of the leading manufacturers and suppliers of thermal insulation to the aluminum industry. We offer thermal insulating products for insulating buildings and industrial equipment (aluminum reduction cells, holding and smelting furnaces, boilers and pipelines, etc.) at service temperatures of up to 900°C (1652°F). The product range includes diatomite insulating bricks and blocks, insulating mortars and aggregates. Diatomovy Kombinat is an established and forward-thinking organization, providing thermal insulating diatomite products of the highest quality around the world for 80 years.

## **DMC Clad Metal Division**

**#738**

**Boulder, Colorado**

**[www.dynamicmaterials.com](http://www.dynamicmaterials.com)**

Dynamic Materials Corporation, "DMC," is the world's leading manufacturer of explosion welded metals. DMC manufactures Detaclad®, explosion clad plate, at its three European factories: Nobelclad in France, Nitro Metall in Sweden, and now at Dynaplat in Germany as well as Clad Metal in Mt. Braddock, Pennsylvania. Virtually any metal combination can be welded using the Detaclad® process. It is often used to fabricate pressure vessels for the chemical process industry that are subject to corrosion and high temperatures. DMC also manufactures bi-metal welding transition joints for joining fully welded connections between various combinations of aluminum, carbon steel, copper alloys, and titanium for transition applications. ETJ2000 is primarily used to join aluminum to steel in aluminum smelters.

## **EBSD Analytical Inc.**

**#710**

**Lehi, Utah**

**[www.ebsdanalytical.com](http://www.ebsdanalytical.com)**

EBSD Analytical offers the very best in EBSD services to researchers worldwide. With over 10 years experience in EBSD technique and analysis, and using the very latest in EBSD hardware and software, we provide you with the highest quality data in a short turnaround time. Analysis includes texture, orientation maps, ODFs, grain size/shape, grain boundaries, pole/inverse pole figures, plus much more.

## **ECL**

**#312**

**Ronchin, France**

**[www.ecl.fr](http://www.ecl.fr)**

With more than 60 years experience, ECL is the world leading smelter equipment manufacturer and is 100% dedicated to the aluminum industry. ECL offers complete solutions for the smelter's reduction, carbon, and metal sectors. From design and manufacturing to erection, through training, maintenance, audit, and refurbishment, ECL provides products and services adapted to the needs and demands of its customers, whatever the reduction technology. A high level of innovation and an unmatched expertise allow ECL to offer solutions, from single machines to turnkey projects, that help aluminum smelters in their productivity and EHS efforts.

## **EDAX Inc.**

See our ad on the inside back cover!

**#707**

**Mahwah, New Jersey**

**[www.edax.com](http://www.edax.com)**

EDAX raises the standard as the technical innovator with high performance and functionality that gives you confidence in your results. For many years EDAX has lead the industry as the world's largest supplier of EDS, EBSD and WDS systems and as the technical and performance leader. EDAX-TSL integrated products provide a powerful and unique combination of elemental information from EDS and structural information from EBSD in the EDAX Pegasus, while the EDAX Trident combines the EDS and EBSD capabilities with WDS to provide a complete solution. EDAX continues to raise the standard with advanced and innovative features in an easy to use format, providing the best results and tools that assure confidence in those results.

## **Eirich Machines Inc.**

See our ad on page 32 of JOM!

**#211**

**Gurnee, Illinois**

**[www.eirichusa.com](http://www.eirichusa.com)**

Eirich Machines Inc. of Gurnee, Illinois, is a manufacturer of the Eirich Intensive Mixer, noted for the many advantages it provides the metallurgy industries. Eirich has been providing machines and complete plants to the carbon industry for more than 30 years. A constantly growing number of renowned manufacturers of carbon products all over the world are currently using EIRICH equipment. We offer the latest state-of-the-art technology for coke heating, mixing and re-mixing/cooling of pre-bake and Söderberg anode paste. The capacities of our batchwise and continuous systems range from 10 to nearly 60 tons/hour in a single line. Our latest development is the EIRICH Intensive Mixing Cascade (EMC) for the all-intensive preparation of anode paste at the lowest cost and the highest efficiency. For more information on our capabilities, please visit us in Booth #211.

## **Elsevier**

**#240**

**New York, New York**

**[www.elsevier.com](http://www.elsevier.com)**

Elsevier is a world-leading publisher of scientific, technical and healthcare information products and services. Elsevier publishes a range of high quality journals covering all aspects of the materials science field, including key publications such as Acta Biomaterialia, Biomaterials, Carbon, Polymer and the Journal of Materials Processing Technology.



**Erico Inc.**  
#705  
Burton, Ohio  
[www.erico.com](http://www.erico.com)

Erico is a leading designer, manufacturer and marketer of precision-engineered specialty metal products serving global niche product markets in a diverse range of electrical, construction, utility and rail applications. Erico® Rail & Industrial: Connecting and bonding products based on exothermic connection technology.

**FEI Company**  
#730  
Hillsboro, Oregon  
[www.fei.com](http://www.fei.com)

FEI's Tools for Nanotech™, SEM, TEM, and DualBeam™ FIB/SEM instruments are ideal for studies of materials, metals, and minerals, enabling advanced characterization and analysis at nanoscale dimensions. New DualBeam EBSD provides 3-D crystallographic data. FEI SEMs offer imaging and analysis solutions for challenging samples such as powders, polymers, films, carbon nanotubes, nanoparticles, porous and organic materials. Quanta SEM series adds in-situ dynamic experiment capabilities for humidity cycling, stress testing and high temperature studies. FEI TEMs, known for ease of use, deliver atomic resolution imaging and characterization of materials, with new Titan TEM supporting structural research at the sub-Å scale.

**Fives Solios**  
#513  
Saint Germain en Laye, France  
[www.fivesgroup.com](http://www.fivesgroup.com)

Fives Solios is one of the companies of a major international group, with considerable experience in industrial engineering and in management of large projects all over the world. The multi sector expertise of the Fives Group gives a global vision of the aluminum industry, which provides a continuous source of innovation for our R&D Department. By sharing this experience with our customers, Fives Solios is developing new industrial solutions with an objective of safety, reliability, sustainability and environmental protection. Fives Solios expertise allows us to design and supply process equipment and turnkey plants for the main aluminum producers worldwide in three key sectors: Reduction, Carbon, and Casthouse.

**FLSmidth Minerals**  
#223  
Bethlehem, Pennsylvania  
[www.flsm.com](http://www.flsm.com)

FLSmidth Minerals is your one source for the world's largest installed base of original equipment offering enhanced performance, increased recoveries, lower energy consumption, and proven reliability that are unmatched in the mining and minerals processing industry. Few other technology suppliers can offer such a broad range of equipment and processes including: crushing, grinding, classifying, flotation, thickening and clarifying, vacuum and pressure filtration, pyroprocessing, slurry handling and material handling, along with OEM quality replacement parts, modernization services and other after-sale services.

**Fluor**  
#125  
Greenville, South Carolina  
[www.fluor.com](http://www.fluor.com)

Fluor provides plant construction and turnaround construction management, plant improvement, operations and maintenance, plant engineering, maintenance technology, and technical training and support. We focus on safety, schedule and budget at your site.

**Gautschi (Maerz-Gautschi)**  
#600  
Tagerwilen, Switzerland  
[www.maerz-qautschi.ch](http://www.maerz-qautschi.ch)

Gautschi™ the Aluminium Division of Maerz-Gautschi, is a leading supplier of equipment for primary aluminium cast houses and recycling plants. The product range includes: melting and holding furnaces; horizontal D.C. casting plants; open mold ingot casting and stacking plants; vertical D.C. casters for extrusion billets; AIR GLIDE® and AIRSOL VEIL® mold technology; pusher-type furnaces for rolling slab; homogenizing furnaces for extrusion billet and rolling slab; multiple chamber furnaces for coil and foil annealing; and single coil annealing furnaces.

## **GE Water & Process Technologies**

#324

Trevose, Pennsylvania

[www.gewater.com](http://www.gewater.com)

GE Water & Process Technologies, a unit of General Electric Company, is an industry leader in solving the world's most pressing water reuse, industrial, municipal, and drinking water needs. Through desalination, advanced membrane, separation solutions, water reuse, wastewater management and process technologies, GE delivers value to its customers. GE provides value by improving performance and product quality, reducing operating costs, and extending equipment life through a broad range of products and services that are designed to optimize total performance. Our solutions protect customers' assets by prevent corrosion, fouling and scaling and safeguard the environment through water conservation and energy reduction.

## **Giesel Verlag GmbH –**

### **Aluminium International Journal**

#811

Isernhagen, Germany

[www.giesel.de](http://www.giesel.de)

ALUMINIUM-International Journal for industry, research and applications-is the leading international journal (bilingual: German/English) for more than 80 years. It deals with everything that concerns the material, its extraction, processing, recycling and applications. Matters of economics and the ecological consequences of using aluminum are also considered. The scope of the month-by-month reporting includes scientific contributions and condensed information about new technologies and applications. The journal addresses aluminium producers, semis manufacturers, foundries, processors, metal and semis traders and, not least, research institutes concerned with aluminium. ALUMINIUM is circulated in over 40 countries worldwide—made in Germany, distributed to the world.

## **Gillespie & Powers, Inc.**

#831

St. Louis, Missouri

[www.gillespiepowers.com](http://www.gillespiepowers.com)

Our special expertise in the furnishing of melting and process equipment is the total quantitative approach to all phases of the design. We take a comprehensive look at our clients' overall process and their end product(s); we listen and assess their needs, goals, concerns and expectations prior to designing a single item. We work closely with our clients to design the equipment that will work for their long-term goals without compromising flexibility in their process. We can offer custom solutions found nowhere in the industry. Let G&P help solve your problems.

## **GLAMA Maschinenbau GmbH**

#613

Gladbeck, Germany

[www.glama.de](http://www.glama.de)

GLAMA has designed and built heavy-duty mobile equipment for aluminum potrooms, cast houses and anode rodding shops throughout the world for more than 40 years. The following types of mobile equipment are available: anode changing vehicles, hammer crust-breakers, tapping trucks, anode pallet transporters, furnace charging machines, furnace tending machines, molten metal carriers, ladle charging trucks, butt cleaning manipulators and coil lift trucks.

## **GNA Alutech Inc.**

#724

Saint-Laurent, QC Canada

[www.gna.com](http://www.gna.com)

A designer of world-class furnaces and equipment for primary and secondary aluminum producers with offices in Canada and China.

## **Gouda Vuurvast N.V.**

#329

Gouda, The Netherlands

[www.goudavuurvast.nl](http://www.goudavuurvast.nl)

Gouda is an innovative refractory producer (bricks and monolithics) with global experience and a long track record of supplying superior quality refractories all over the world, combined with innovative installation technology for more than 100 years. Gouda creates, manufactures, sells and installs top quality refractory linings. Gouda's solutions play an important role in aluminum, ferrous and non-ferrous metal, petrochemical, environmental and energy industries. Based on an industry-oriented structure and highly competent employees, we guarantee an optimal support which results in efficiency and reduction of refractory cost. Also Gouda's R&D department works in close co-operation with its customers and renowned research institutes. Gouda's quality assurance is based on the international ISO 9001 standard. Besides our head office in Gouda, we also have sales locations in Australia, Belgium and Germany. Gouda offers a total care package: manufacturing (refractory bricks, castables, mortar, self-flowing castables, complex pre-cast shapes), engineering, research and development, and installation (several new techniques such as: pumping, shotcreting).

## **Graphite Engineering & Sales**

**#209**

**Greenville, Michigan**

**[www.graphite-eng.com](http://www.graphite-eng.com)**

Graphite Engineering & Sales is a customer-oriented company specializing in cutting and machining graphite products. The level of excellence we demand of our quality and service have provided Graphite Engineering with continuing success and growth. Graphite Engineering will have on hand knowledgeable sales engineers to answer any questions you may have. Graphite Engineering specializes in machining graphite per your specifications. Graphite Engineering will be displaying nuts and bolts, brazing fixtures, degassing shaft and rotor, canister inserts, run-out plates, molds, secondary billet casting rings, heating elements, electrodes, crucibles, sintering trays, sintering boats.

## **Graphite Machining Inc.**

**#330**

**Topton, Pennsylvania**

**[www.graphitemachininginc.com](http://www.graphitemachininginc.com)**

GMI is an independent "Global" company which produces graphite, carbon and specialty graphite for the aluminum industry. Our company takes great pride in cutting and machining graphite products at their state-of-the-art facilities located in Topton PA, Robersonia, PA, and Metamora, MI. We have been working and listening to "key" aluminum producers in order to develop and meet their needs for a new series of low maintenance liquid metal circulation and transfer pumps. The new pump will be on display at our booth. GMI product lines consist of: canisters; disperser heads; diffusion heads; fluxing tubes; flux box tubes; lubricating rings; graphite rings, VDC molds; porous graphite diffusion heads; rotors, impellers and shafts. Further information about GMI visit our web site [www.graphitemachininginc.com](http://www.graphitemachininginc.com) or call us at #610-682-0080.

## **Hauck Manufacturing Co.**

**#227**

**Cleona, Pennsylvania**

**[www.hauckburner.com](http://www.hauckburner.com)**

Hauck Manufacturing Company designs, builds and markets a wide range of combustion products. Hauck burners, blowers and controls products are key components in industrial heat processing equipment used by most industries utilizing thermal energy. In business for over a century, Hauck has earned an outstanding reputation for its products, and the loyalty of customers nationally and in world markets.

## **Heggset Engineering AS**

**#238**

**Kristiansund, Norway**

**[www.heggset.no](http://www.heggset.no)**

Heggset Engineering has supplied the aluminum industry with equipment and engineering services for more than 30 years. The company has built a good reputation in the market by providing innovative solutions that are built to last. The main focus is on cast-house-and anode rodding plant technologies and services. A range of standard products can be supplied, as well as custom built versions. In addition special machines can be developed and supplied based on customer needs. Please visit [www.heggset.no](http://www.heggset.no).

## **Hencon BV**

**#545**

**Uift, Gelderland Netherlands**

**[www.hencon.nl](http://www.hencon.nl)**

Backed by more than 50 years of experience, Hencon Holland is a worldwide supplier of "Special Mobile Equipment" for the aluminum industry. Besides the main plant in The Netherlands, Hencon has production and maintenance facilities in South Africa, Mozambique and Russia. The delivery program covers the complete range for the potroom and the cast house, such as furnace charging machines; furnace tending machines; hot metal transport and tilting vehicles; multipurpose vacuum cleaners; anode pallet transporters; tapping trucks; anode changing machines; alumina/fluoride/soda/bath feeding trucks; anode covering trucks; cavity cleaners; crust breakers; anode briquette feeders; rack raising trucks; manifold handling trucks; anode spading/tapping trucks; side loading forklift trucks; and platform lifting trucks.

## **Hertwich Engineering**

**#708**

**Toledo, Ohio**

**[www.hertwich.com](http://www.hertwich.com)**

Based in Braunau, Austria, with an office in the U.S.A., this supplier of equipment to the aluminum industry will be showcasing its entire line of products, including: fully automatic inline and stand-alone ultrasonic inspection stations, continuous homogenizing and cooling systems ranging from 8,000 tpy up to 160,000 tpy, fully automatic billet sawing and stamping plants, briquetting presses, fully automated billet and log stacking systems complete with bundle manipulation. Newly introduced equipment will include ingot casting lines (water free), contaminated scrap melting furnaces, rotary tilting furnaces and complete compact remelt operations for the processing of extrusion scrap into fully homogenized extrusion billet.

## **HMR Group AS**

#339

Husnes, Norway

[www.hmr.no](http://www.hmr.no)

For over 50 years HMR Group of 10 companies supplies products, equipment and engineering advice to the aluminum industry. Our potroom vehicles, anode stud bars and collector bars are used in all Hydro Aluminium's smelters in Norway. We obtained this position by continuous development of our competence, reliability and competitiveness. Contact us for information regarding special vehicles and equipment. During TMS 2008 we will feature an upgraded model of a tapping vehicle, which together with the hot crucible cleaner, tube cleaner, siphon pre-heater form the complete closed tapping system, developed by HMR Hydeq together with the drivers and industrial health service to meet the future demand for mobile equipment.

## **HRV Engineering Group**

#723

Reykjavik, Iceland

[www.hrv.is](http://www.hrv.is)

HRV Engineering Group is an alliance of three of Iceland's largest and long-established engineering consultants—Hönnun, Rafhönnun, and VST. HRV Engineering Group has played a leading role in a range of local and international construction projects, including Iceland's three aluminum smelter plants. Drawing on extensive professional skills and technical expertise, acquired over decades of operating in some of the world's extreme climates and toughest geological conditions, HRV Engineering Group offers clients the portfolio of services, advice and solutions required to take any project—from prefeasibility and environmental impact assessment, to design, construction and project management—from drawing board to completion.

## **Hysitron**

#643

Minneapolis, Minnesota

[www.hysitron.com](http://www.hysitron.com)

As the world leader in nanomechanical testing, Hysitron is solely dedicated to the development of testing solutions for nanoscale mechanical characterization. Known as the "Pioneers of Scanning Nanoindentation", Hysitron's instruments provide high-speed in-situ SPM imaging in addition to the measurement of many mechanical properties, including hardness, modulus, fracture toughness and wear resistance. Advanced techniques include nanoDMA® for time dependent and viscoelastic materials, modulus mapping for quantitative large area scans and nanoECR™ enabling simultaneous measurements of current, voltage, force and

displacement. Higher force indentation combined with 3D scratch capabilities provide the ability to quantitatively study materials from the micro- through to nano-scale. Stop by to view our newest product, the PI 95 PicoIndenter®, Hysitron's quantitative depth-sensing indenter capable of direct-observation nanomechanical testing in a TEM and let us show you that seeing is believing.

## **iCrane Systems Inc.**

#729

Laval, QC Canada

[www.icranesystems.ca](http://www.icranesystems.ca)

iCrane Systems Inc. offers custom engineering and fabrication for overhead traveling cranes, semi- and full-gantires, fixed, hoists, monorail cranes, and specialized handling systems.

## **IMPEC AS**

#139

Ovre Ardal, Sogn Norway

[www.impec.no](http://www.impec.no)

IMPEC AS, supplier of rodding equipment, represents 30 years of experience in aluminum smelters. IMPEC has a license agreement with Hydro Aluminium giving us the possibility to deliver equipment made for Hydro worldwide. IMPEC'S rodding shop is characterized by: Turn-key systems that ensure system interfaces, flexible capacity, fully scalable, customized and cost efficient. All equipment is field proven, components chosen by experience. We will present some of our selected equipment such as our patented stub straightening machine, our grinding machine and our new and improved vision system for rodding with butt and stub classification, in addition to tracking of rods and anodes. Improving process efficiency - the IMPEC way.

## **Industrial Heating Magazine**

#741

Pittsburgh, Pennsylvania

[www.industrialheating.com](http://www.industrialheating.com)

Industrial Heating is the leading thermal processing journal in the world. As the industry's largest and most preferred publication, Industrial Heating has over 23,000 monthly subscribers. Written for thermal process engineers, articles deal with nonferrous and ferrous thermal processing technologies and practices. Please come to our booth and take a FREE copy of our publication.

## **Industries 3R Inc.**

**#206**

**Danville, Canada**

**[www.industries3r.com](http://www.industries3r.com)**

A leader in the designing and the manufacturing of high temperature industrial products, Industries 3R owes its fame to close to 30 years of expertise in research and development. Thanks to the many made-to-measure projects developed by our team, numerous companies protect and maximize the performance of their equipment and their manufacturing processes. Our innovations and expertise enable us to occupy an enviable presence in foundries, aluminum plants, iron and steel manufacturers, pulp and paper mills, petrochemical industries and thermal plants. Over the past years, our products have also met the standards required by contractors specialized in plumbing, heating or insulation, as well as furnace, stove and fireplace manufacturers.

## **Innovatherm GmbH+Co.KG**

**#631**

**Moers, Germany**

**[www.innovatherm.de](http://www.innovatherm.de)**

Innovatherm is an engineering company which specializes in firing and combustion technology. In our booth Innovatherm presents our latest products and services for the aluminum industry, mainly comprising: ProClean Optimized Fume Treatment Plants for the aluminum industry; ProBake Advanced Firing Systems for anode baking furnaces; ProCast charging management, target alloy calculation and melting optimization; and Supervisory Control Systems (SCADA) for primary and secondary casthouses.

## **Intergraphite**

**#222**

**Zaporozhye, Ukraine**

**[www.ukrgrafit.com.ua](http://www.ukrgrafit.com.ua)**

Intergraphite is the leading Ukrainian manufacturer of graphite electrodes for electric steel furnaces, ore-smelting furnaces and other types of electric furnaces, commodity carbon pastes for Söderberg electrodes, carbon-based lining materials for the metallurgy, machine-building and chemical industries. We offer guaranteed quality levels and are committed to constant improvement of technology and processes. As the exclusive representative of UKRG, in recent years Intergraphite has gained accreditation for its quality systems with ISO 9001:2000, for its environmental practices through ISO 14001:2004, and for its health & safety procedures through OHSAS 18001:1999.

## **International Magnesium Association**

**#822**

**Wauconda, Illinois**

**[www.intlmag.org](http://www.intlmag.org)**

Founded in 1943, the International Magnesium Association (IMA) is the global voice of the magnesium industry. Its mission is to promote the use of the metal magnesium and to educate both manufacturers and consumers of the numerous options and benefits the metal magnesium provides. IMA's members consist of primary producers of the metal and its alloys, recyclers, foundries, fabricators, end-users and suppliers. The IMA serves the industry and the membership through its Annual World Magnesium Conference, seminars, statistical programs, and publications. Annual Events: U.S. Automotive Seminar, Livonia, MI—Spring; European Automotive Seminar, Germany—Spring; Annual World Magnesium Conference—May.

## **International Titanium Association**

**#108**

**Broomfield, Colorado**

**[www.titanium.org](http://www.titanium.org)**

The International Titanium Association (ITA) is a nonprofit trade association established in 1984 by the leading companies in the titanium industry. Our purpose is to educate the members of the industry, foster the development of new applications for titanium, as well as provide a forum for the exchange of ideas within the industry. The ITA furthers its educational mission through annual conferences, workshops and seminars. The ITA has instructed thousands of professionals in all aspects of titanium usage. The ITA currently has over 170 member organizations.

## **Jayne Industries**

**See our ad on page 8 of JOM!**

**#101**

**Stoney Creek, Canada**

**[www.jayneindustries.com](http://www.jayneindustries.com)**

Jayne Industries manufactures the complete line of stainless steel V anchors, c clips, studs and threaded products for refractory and ceramic fiber linings. Jayne has provided products and services to the aluminum, and other nonferrous and ferrous industries for over 30 years. Hexmesh and accessories, as well as Jayne large volume refractory pan and paddle mixers, are manufactured at our Stoney Creek, Ontario, Canada facility. Jayne also supplies cast alloy castings and Fibercon stainless steel fibers for refractories. Visit our booth (#101) to further discuss your anchor and hardware requirements.

## **JEOL USA, Inc.**

See our ad on page 34 of *JOM!*

**#837**

**Peabody, Massachusetts**

**[www.jeolusa.com](http://www.jeolusa.com)**

JEOL is a leading global provider of high resolution electron microscopes and scientific instruments used in materials research, nanotechnology, failure analysis/inspection, and semiconductor R&D. Key product lines include: LV and FE-SEMs for fast, flexible, analytical observation and review of nanoscopic details; TEMs with high voltage/ultrahigh resolution imaging at the atomic level; surface analyzers for specialty needs; sample prep tools for SEM and TEM applications. CarryScope (model #JCM-5700), JEOL's new, mobile high-resolution SEM will be on-site for product demonstrations.

## **JMatPro**

**#231**

**Surrey, United Kingdom**

**[www.jmatpro.com](http://www.jmatpro.com)**

This is a unique software program for predicting phase transformations, physical/mechanical properties and solidification properties for complex alloys (based upon your chemical compositions). It provides fast and robust calculations that have been extensively validated to ensure sound predictions of the properties. Our software combines industrial relevance with realistic physical models and user-friendly interfaces that work with "real" materials which are multi-component in nature and exhibit complex behavior.

## **Kabert Industries, Inc.**

**#605**

**Villa Park, Illinois**

**[www.kabert.com](http://www.kabert.com)**

Since 1960, Kabert Industries, Inc. has been furnishing the aluminum industry with casting supplies. Fiberglass cloth, an inexpensive and effective method of nonferrous molten metal distribution and filtration, is specially woven for the aluminum industry. In addition to roll goods, the cloth can be cut and sewn into mini channel bags, trough socks and other shapes. Other products available include gaskets, primarily used to seal and insulate troughs. Kabert also is a leading supplier of vacuum formed shapes and board. We are proud of our reputation in the aluminum industry. Our total commitment is focused in continuing to offer our customers across the world the latest technology and unparalleled service at competitive rates.

## **Karrena Refractory, LLC**

**#824**

**Williamsville, New York**

**[www.beroa.eu](http://www.beroa.eu)**

Karrena Refractory from Buffalo, NY and Forter SA, from Lisbon, Portugal are subsidiaries of Beroa GmbH of Germany. Beroa is the biggest refractory installation company in the world with revenues over 0.5 billion dollars per year. In the aluminum industry our presence is world wide with the refractory installation of carbon baker, pot lines and bauxite calcinators in Norway, Germany, Holland, Australia, Venezuela, Argentina, Brazil, Bahrain and Oman. The Beroa Group is your refractory partner in the aluminum industry. Please visit [www.beroa.eu](http://www.beroa.eu) or call 1-815-715-6936 for more information.

## **KB Alloys, Inc.**

**#621**

**Robesonia, Pennsylvania**

**[www.kballoys.com](http://www.kballoys.com)**

KB Alloys, Inc. produces aluminum-based master alloys including TIBOR®, TITAL®, and TICAR® grain refiners, binary hardeners and special purpose alloys, including BORAL®, strontium-aluminum, strontium-boron (STROBOR®) and beryllium aluminum. The master alloys are available in a variety of convenient-to-use forms including coiled rod, cut rod and ingot. With the use of statistical process control, KB Alloys controls its processes from alloy conception through all the manufacturing steps, including raw materials, process monitoring and product testing, to on-time delivery of quality products. Anglo Blackwells Ltd. produces strontium-aluminum and other specialty alloys. KB Alloys is the exclusive distributor for NGK Metals' beryllium-aluminum and Bostlan's compacted hardeners. KB Alloys has a joint venture in China, ALMAT which markets products into the Asian market.

## **KBM Affilips BV**

**#715**

**Oss, The Netherlands**

**[www.kbmaffilips.com](http://www.kbmaffilips.com)**

KBM Affilips is dedicated to the development, manufacture and marketing of specialty master alloys for the metallurgical industry. The company is backed by manufacturing facilities located in the Netherlands (KBM) and Belgium (AFFILIPS). Both KBM and AFFILIPS are fully ISO 9000 and ISO 14001 approved and offer the most complete range of master alloys for the metallurgical industry. KBM Affilips offers products for the aluminum industry (including a full range of hardeners, tablets and briquettes; the very complete product range for the copper industry; and NiMg (and complex FeNiMg), additives for super alloy production as well as Pb and Zn master alloys.

## **Kempe Group of Companies**

#620

Geelong, VIC Australia

[www.kempe.com.au](http://www.kempe.com.au)

Kempe is the largest provider of asset and maintenance services in the aluminum smelting industry. Kempe has the most extensive product range for the aluminum smelting industry and is one of the top five global suppliers. Kempe works for 30 smelters in 20 countries across 7 regions – Australasia, Middle East, Africa, Asia, Europe, North America & South America. Kempe has in-house manufacturing in Australia, China, UAE and Mozambique. Kempe has 1200 employees globally—increasing to 2000 employees in 2008 to meet project and expansion requirements. Kempe supplies products and turnkey projects for anode handling and cleaning, rodding shops, butt cleaning (hot and cold), bath cooling and processing, plus other carbon, potroom and casthouse equipment.

## **K-Tek International**

#828

Wilsonville, Oregon

[www.ktekintl.com](http://www.ktekintl.com)

We are a supplier of various aluminum alloy products (master alloys, casting alloys, grain refiners, grain hardeners, and alloying additives). Our products are offered in various shapes (ingots, waffles, rods).

## **KT Grant, Inc.**

#830

Export, Pennsylvania

[www.kt-grantinc.com](http://www.kt-grantinc.com)

Formerly Louis A. Grant, Inc. and Keibler Thompson Company, KT Grant, Inc. continues to provide innovative, safe and cost effective solutions and methods for refractory removal and maintenance. We offer a fully maintained and operated service as well as sales and rentals. We provide a complete line of radio controlled tearout machines for melters, holders, furnaces plus metal skimmers, furnace hot clean systems, etc. for the metal industries. We supply custom built equipment for individual requirements. Please stop by our booth at the TMS show or visit our website at [kt-grantinc.com](http://kt-grantinc.com) to see our full line of products and services.

## **LAEIS GmbH**

#631

Trier, Germany

[www.laeis-gmbh.com](http://www.laeis-gmbh.com)

LAEIS is a leading supplier of machines and plants for various industries including: ceramics, refractories industries, building materials, carbon, and others. LAEIS has developed a new concept for

a paste preparation and anode pressing plant based on a hydraulic high performance press for a capacity of up to about 50 t/h in a single line, matching the capacity of the best presently available paste preparation lines. The plant is based on a 1,600 t vacuum press which is optimally adapted to the anode production requirements and is useful for practically all anode formats produced today. The new anode pressing technology provides many advantages regarding production capacity, plant availability, anode quality and contributes to a remarkable reduction of the environmental impact.

## **Life Cycle Engineering**

#115

Charleston, South Carolina

[www.lce.com](http://www.lce.com)

Life Cycle Engineering (LCE) is a leading provider of reliability consulting, engineering services, and applied technology solutions that help both government and private enterprises achieve their business goals. Widely recognized as the premier provider of innovative and successfully executed reliability and maintenance solutions worldwide, areas of focus for LCE include: design and engineering, logistics support, information technology applications, program management, change management, education, and holistic implementations of Reliability Excellence (Rx). Founded in 1976, LCE is headquartered in Charleston, South Carolina with offices nationwide. For more information, please visit [www.LCE.com](http://www.LCE.com) or call 843-744-7110.

## **Light Metal Age Magazine**

#205

South San Francisco, California

[www.lightmetalage.com](http://www.lightmetalage.com)

Light Metal Age is the pre-eminent magazine of the light metal world. For over 64 years, Light Metal Age has covered primary production and semifabrication of light metals, primary aluminum, and associated nonferrous industries throughout the world. Circulation goes to smelters, rolling mills, extrusion plants, sheet, rod, and wire mills, foundries, and die casting, anodizing, roll coating, coil coating, and forging operations. Recipients are executives, general managers, plant managers, technicians, metallurgists, chemists, and engineers responsible for fabrication, production, and operation. Some of the editorial topics covered in Light Metal Age include: extrusion process control, aluminum automotive applications, pot-line technology, direct chill casting, secondary aluminum production, casthouse metal quality, anodizing, and rolling mill technology.

K

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## **L.P. Royer Inc.**

#221

Lac-Drolet, QC Canada

[www.lproyer.com](http://www.lproyer.com)

Since 1934, L.P. Royer Inc. has designed, developed and built specialized safety footwear. We work in collaboration with the industry to adapt our products to its needs. With the ISO 9001-2000 certification, our products are in accordance with the Canadian (CSA), American (ASTM) and European (CE) standards.

## **Maruzen International Co. Ltd.**

See our ad on page 31 of *JOM*

#245

Secaucus, New Jersey

[www.maruzen.com](http://www.maruzen.com)

Maruzen International will be exhibiting the online version of the highly renowned journal "Materials Transactions" published by the Japan Institute of Metals (JIM). This journal covers the newest high-quality research results from basic sciences to applied technology in the field of materials science and engineering. And with the online version, the subscriber can access to all the volumes back to Volume 1 published in 1960. The sample print copies are also available at the booth, and journals published by other Japanese academic societies in the relevant subject areas are exhibited as well.

## **MECFOR Inc.**

#339

Chicoutimi, QC Canada

[www.mecfor.com](http://www.mecfor.com)

MECFOR, a Canada-based corporation, designs, fabricates and supports specialized vehicles and process equipment for the primary and secondary aluminum industry worldwide. Our understanding of the aluminum production processes makes us an excellent turnkey project partner as we can actively and effectively participate in the determination of the best global equipment solution with our client. Our focus being the aluminum industry, all of our personnel clearly understand the harsh working environment of smelters, and our equipment is designed accordingly. We specialize in multifunctional cast house vehicles, bath crucible handlers, anode and crucible haulers, underpot cleaning vehicles as well as anode grooving machines and other custom process equipment.

## **Mechatherm International Ltd.**

#626

Kingswinford, W Midlands, United Kingdom

[www.mechatherm.com](http://www.mechatherm.com)

Mechatherm, privately owned and formed in 1973, has developed a worldwide reputation specializing in furnaces for aluminum, copper and brass industries. The product range: aluminum foundry—melting and holding, rotary, scrap charging machines, vertical d.c. casting machines, turnkey foundry installations; aluminium extrusion—log heaters and shears, ageing ovens, automatic ageing oven basket handling systems and die ovens; aluminium heat treatment—air recirculated furnaces; aluminium dross reclamation—joint venture with Jesse Brough Metals, custom designed for the dross to be recycled—the full range of dross recycling plants include refining and separation into useable products and remelting of aluminium metallics; copper and brass extrusion—gas-fired billet heating furnaces, roller hearth and walking beam.

## **Mercury Computer Systems**

#838

Chelmsford, Massachusetts

[www.3dviz.mc.com](http://www.3dviz.mc.com)

Mercury Computer Systems—Visualization Sciences Group—is the leading provider of 3D visualization software for geosciences, materials science, oil and gas, manufacturing, and engineering. Our solutions range from 3D components for application developers to advanced 3D visualization framework, from desktop to clusters and immersive VR, bringing high-performance visualization and dynamic GPU computation to our customers' demanding projects. Mercury Computer Systems has worldwide R&D, support and sales locations.



## **Metallurg Aluminium**

**#320**

**Swedesboro, New Jersey**

**[www.MetallurgAl.com](http://www.MetallurgAl.com)**

Metallurg Aluminium combines the strengths of its members, London & Scandinavian Metallurgical Co Limited (LSM) and Companhia Industrial Fluminense (CIF). With its two manufacturing facilities, located in the U.K. and Brazil, its professional worldwide sales force and global distribution network, Metallurg Aluminium provides global solutions that turn today's ideas into tomorrow's innovations. Its diversified product portfolio includes aluminium grain refiners, master alloys, metal treatment and modification alloys, hardeners—including compacted powder products, powders and rod feeding and decoiling equipment. We invite you to visit the Metallurg Aluminium booth for the latest information on our products and services and how they can be used in your applications to improve yields and lower costs. Metallurg Aluminium—a long-time proud supporter of TMS!

## **Metallurgical Society of CIM (MetSoc)**

See our ad on page 35 of *JOM!*

**#745**

**Montréal, QC Canada**

**[www.metsoc.org](http://www.metsoc.org)**

The Metallurgical Society (MetSoc) of the Canadian Institute of Mining, Metallurgy and Petroleum was formed in 1967 under the umbrella of CIM to serve the needs of all Canadian Metallurgists working to transform ores to metals and other useful commercial products. MetSoc, 1,200 strong, provides an open forum for engineers, scientists and technical personnel and students to exchange and share new knowledge. To enhance the exchange of information MetSoc publishes a number of proceedings that touch a number of topics including: hydrometallurgy; pyrometallurgy; copper; magnesium technology; mineral processing; nickel-cobalt; economics and markets; sustainable development; process control and optimization; fabrication and downstream applications; light metals; advanced steels; aerospace materials and manufacturing; environment; nanomaterials; zinc and lead; management in metallurgy.

## **Micro Materials Ltd.**

**#740**

**North Wales, United Kingdom**

**[www.micromaterials.co.uk](http://www.micromaterials.co.uk)**

The MML NanoTest™ (Wrexham, U.K.) is a world leading comprehensive nanomechanical test center, offering a range of methods of materials characterization, including nanoindentation, nano-impact and nano-scratch and wear measurements. In recent years, MML has pioneered nanomechanical testing in real-world

conditions. This innovative approach has led to the development of unrivalled testing modules, among them the high temperature testing module, which allows testing of a sample heated up to temperatures of 750°C. MML also offers a unique liquid cell, which allows the testing of samples fully immersed in fluid. The patented MML nano-impact and fatigue system affords unrivalled information on fracture and fatigue behavior. For more information, please contact Denise Hoban, International Business Development Manager, or visit the MML website: [www.micromaterials.co.uk](http://www.micromaterials.co.uk).

## **Mid-Mountain Materials Inc.**

**#213**

**Mercer Island, Washington**

**[www.mid-mountain.com](http://www.mid-mountain.com)**

Mid-Mountain Materials Inc., dedicated to the aluminum industry for 30 years, provides industrial textiles that enable the industry to move toward energy efficiency and environmental compliance. Our engineered sealing systems use our proprietary ARMATEX® QF refractory coated textiles. We custom design systems for reduction cells that aid in energy conservation, contain unwanted pollutants, and maximize pollution control equipment. In addition to our ARMATEX® coated fabrics, other thermal barrier products in our high performance textile and insulation product lines include: thermal insulation materials, engineered fabricated components, leached silica cloth, and refractory specialties for use in carbon bake and cast house areas for fuel efficiency, safety and maintenance.

## **MINTEQ International Inc.**

**#118**

**Slippery Rock, Pennsylvania**

**[www.mineralstech.com](http://www.mineralstech.com)**

MINTEQ International Inc. is one of the world's largest producers of monolithic and specialty refractory lining systems for the steel, aluminum, cement, glass and power generation industries. MINTEQ is a resource- and technology-based company with manufacturing, and research and development, facilities around the globe. An industry leader at developing and introducing new and innovative technologies to the aluminum industry, MINTEQ's OPTISHOT™ AL and FAST FIRE™ AL shotcrete castable lining systems provide aluminum producers with the most durable refractory maintenance lining systems in the marketplace. The OPTISHOT™ AL and FAST FIRE™ AL lining systems also provide the fastest refractory installation method to rebuild and construct complete new furnaces without extensive engineering, complicated placement techniques and extensive lead times.

## **Morgan AM&T (National Electrical Carbon)**

#810

Fostoria, Ohio

[www.morgancarbon.com](http://www.morgancarbon.com)

Morgan AM &T (Advanced Materials and Technology) is a wholly-owned subsidiary of Morgan Crucible, a global advanced materials technology company. The Specialty Products group of Morgan AM&T (previously National Electrical Carbon), manufactures a broad range of National brand engineered products from carbon, graphite, silicon carbide, and other advanced materials, and offers technologically innovative solutions. Products for the metallurgical market include graphite molds and dies, flux/injection tubes, pump shafts, rotor heads porous gas dispersion heads, and electrical motor brush blocks. In addition, a range of aluminum titanate grades and shapes are available. The National brand has a long history of quality service to the metallurgical market and various suppliers to the industry.

## **Murlin Chemical Inc.**

#201

W. Conshohocken, Pennsylvania

[www.murlinchemical.com](http://www.murlinchemical.com)

Murlin Chemical Inc. will celebrate its 30th anniversary in 2008. Murlin Chemical has supplied the non-ferrous metal industry with bone ash mold release agents all those years. The products, aluminum grade natural bone ash and natural bone ash, manufactured at our plant in West Conshohocken, PA are accepted world wide as the industries premium mold release agent. Bone ash provides a consistent barrier against attack by molten non-ferrous metals when applied to a mold, a refractory trough, a surface, a dross bin, a ladle or any tool that will be exposed to molten metal. Bone ash can be applied as a slurry in water or as a dry powder. Any method for coating a surface can be used. Please visit us at booth 201 to learn more about bone ash.

## **Nalco Company**

#601

Naperville, Illinois

[www.nalco.com](http://www.nalco.com)

Nalco Company is the world's largest water, and process chemicals and services provider to industrial end markets. We serve companies across a broad spectrum of industries and offer a wide range of programs to help customers improve their efficiency and productivity in an environmentally responsible manner. Our products and services focus is on improving overall plant economics, optimizing equipment efficiency, addressing compliance issues and increasing operator capabilities and effectiveness. To ensure that our approach to your business is comprehensive, we carefully monitor interactions between the

mechanical, operational and chemical aspects of your system. From mine to metals, Nalco is your total solution provider.

## **National Filter Media**

#739

Salt Lake City, Utah

[www.nfm-filter.com](http://www.nfm-filter.com)

In 100 years, National Filter Media has become one of the world's largest filter media companies. NFM makes filtration products for vacuum filters, pressure filters and dust collectors. NFM also provides OEM filter replacement parts and consulting services. Our filter frames for the alumina industry have become the industry standard by dramatically increasing flow on the press floor. NFM has also developed new fabrics that are increasing filter life by 150%. Today's metals market is expanding and changing. Companies must get maximum output while maintaining quality. NFM's experts work to help their customers take advantage of today's newest technologies.

## **N.A. Water Systems**

#821

Moon Township, Pennsylvania

[www.nawatersystems.com](http://www.nawatersystems.com)

Water and wastewater solutions and technologies-expertise for the entire water cycle at primary metal facilities-supply water treatment; process water recycle and reuse for melting and hot forming, as well as rolling operations; make-up and cooling water systems, AC-TIFLO® systems for stormwater treatment, wastewater treatment and sludge management, including DenseSludge™ technology for finishing operations; and groundwater supply and cleanup. Water system troubleshooting, water studies, concept design, engineering, water and air permitting, environmental compliance, hydrogeological investigations, air pollution control, project and construction management. Flexible delivery, services, equipment procurement, equipment procurement construction management, design-build, or design-build-operate contracts tailored to project needs.

## **NKM Noell Special Cranes GmbH**

**#527**

**Dechy, France**

**[www.nkm.com](http://www.nkm.com)**

NKM Noell is a leading supplier of cranes and special equipment to the aluminum industry for reduction, carbon and rodding. Supply covers the complete engineering, detail design, manufacturing, start-up and commissioning for individual equipment and turnkey projects: aluminum reduction—pot tending cranes, anode jacking frames, transfer gantry systems, cathode crane, crucible heaters, crucible and pipe cleaning machines, anode clamps; aluminum carbon—furnace tending cranes, flue wall brushing and straightening machines, anode stacker cranes; aluminum rodding—green and baked anode handling, casting and mating stations, stem and pin monitoring, stem brushing and repair, butt precleaning and stripper, butt handling/treatment, bath handling/treatment, loading/unloading station.

## **North American Manufacturing Company**

**#432**

**Cleveland, Ohio**

**[www.namfg.com](http://www.namfg.com)**

North American Manufacturing is a provider of combustion solutions as well as turnkey installations. The company offers a wide range of combustion hardware; complete systems incorporating advanced controls, turnkey furnaces and retrofits, and emergency refractory reline services. North American has been providing solutions and services to the aluminum industry for more than 40 years, specializing in energy savings, emissions reduction and melt rate optimization.

## **Novelis**

**#300**

**Voreppe Cedex, France**

**[www.pae.novelis.com](http://www.pae.novelis.com)**

Novelis PAE is recognized as an expert by aluminum professionals. This company supplies equipment and technical assistance for continuous strip casting, in-line molten metal treatment, automatic slab casting and associated spare parts and consumables. Numerous casthouses have already placed their trust in its technology. From the engineering studies at the start of your project through to successful completion including construction, supervision of installation, start-up and staff training, you will benefit from Novelis PAE's experience and professionalism.

## **Olympus Micro-Imaging Division**

**#109**

**Orangeburg, New York**

**[www.olympusmircoimaging.com](http://www.olympusmircoimaging.com)**

Olympus Industrial America's Micro-Imaging Division offers a wide range of industrial microscopes and micro-imaging systems for advanced materials analysis, metallographic and other precision applications. Featured this year at TMS2008, will be the Olympus LEXT OLS-3100 Laser Confocal Microscope and the SZX16 Stereo Microscope with Discover Essentials Software. The LEXT is designed for sub-micron imaging with outstanding 0.12  $\mu$ m resolution and accurate 3D measurement capability. Magnification to 14,400x satisfies the needs of researchers working between the limits of conventional optical microscopes and scanning electron microscopes (SEMs). The SZX16 uses a Galilean optical system to provide the cutting edge in optical zoom stereo imaging and versatility of configuration. The associated Discover Essentials software offers a wide range of digital imaging and measuring solutions to perform mission critical tasks, such as image acquisition, specialized image processing, annotation, archiving, microscope automation and report generation.

## **Opsis AB**

**#220**

**San Marcos, California**

**[www.opsis.se](http://www.opsis.se)**

Opsis Inc. is the North American supplier of open path monitoring systems for air quality monitoring, continuous emissions monitoring (CEM) and process control. The ultraviolet DOAS technology, developed by Opsis, has received international approvals and provides customers with system solutions for several applications. All systems feature dynamic calibration capability and simple hardware configurations. The ambient system is an EPA approved equivalent method for SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub>. Other Opsis benefits include DOAS system packages, automatic monitoring systems, multigas and multipath systems, fast and continuous measurements, modular construction and simple report generations. Opsis equipment applications include trend monitoring, street level air quality monitoring, and fugitive emissions fence line monitoring among many others.

## **Outotec Ltd.**

See our ad on the inside front cover!

**#321**

**Burlington, ON Canada**

***www.outokumputechnology.com***

In 2001 Outokumpu, a leading global metals and technology group, expanded its offerings to the alumina and aluminum industries. Outokumpu Technology specializes in the design, engineering and delivery of alumina calcining plants (Lurgi Metallurgie), paste plants (KHD Aluminium Technology), rod-rolling shops (Aisco and KHD Aluminium Technology) and casting machines (Aisco). Outokumpu's long term commitment to the metals industries, combined with the technologies of these three reputed suppliers, positions Outokumpu Technology to be the technology and service partner of choice for the aluminum industry. E-mail: [aluminum.technology@outokumpu.com](mailto:aluminum.technology@outokumpu.com).

## **Parker Hannifin**

**#539**

**Cleveland, Ohio**

***www.parker.com***

Parker is the world's leading diversified manufacturer of motion and control technologies and systems. Parker provides precision engineered solutions for a variety of commercial mobile, industrial and aerospace markets. We design and manufacture optimal systems using fluid connectors, hydraulics, pneumatics, instrumentation, refrigeration, filters, electromechanical components, and seals required in motion-control systems. Parker's experience in the aluminum industry spans more than 30 years. Parker has equipped machinery in all phases of aluminum production including smelters, casters and extruders through grinders, rolling mills and strip processing lines, etc.

## **Phoenix|x-ray Systems & Services**

**#122**

**St. Petersburg, Florida**

***www.phoenix-xray.com***

Phoenix|x-ray is a leading provider of custom non-destructive inspection solutions. The company produces ultra high-resolution 2D and 3D x-ray inspection and computed tomography systems for a wide range of applications in materials science. Dedicated to providing premium products and services, Phoenix|x-ray is supported by a worldwide service and support team.

## **Pipeline Systems, Inc.**

**#127**

**Concord, California**

***www.pipesys.com***

Pipeline Systems Incorporated (PSI), established in 1979, is one of the world's leading engineering companies specializing in design of slurry transportation systems. Specialty services include laboratory analysis, steady state and transient hydraulic design, pipeline route selection, evaluation of the hydraulics for complex high pressure piping systems and/or non-Newtonian fluids, pipeline material selection, mainline pump design and selection, computer modeling, SCADA, telecommunications systems. PSI is a CSIA certified engineer offering integration, implementation, maintenance and support services for plant automation and control systems. PSI is able to provide total solutions that integrate control and information systems using a broad spectrum of products and manufacturers including software, hardware, communications and the Internet.

## **ProQuest**

**#632**

**Ann Harbor, Michigan**

***www.proquest.com***

ProQuest provides seamless access to and navigation of more than 125 billion digital pages of the world's scholarship, delivering it to the desktop and into the workflow of serious researchers in multiple fields, from arts and literature to science, technology and medicine. ProQuest's vast content pools are available to researchers through libraries of all types. Users access the information through the ProQuest® and CSA Illumina™ online information systems, Chadwyck0Healey™ electronic and microform resources, UMI® microform and print reference products, eLibrary® and SIR® educational resources, Ulrich's® Serials Analysis System, COS Scholar Universe, and Serials Solutions® resource management tools. For more information, visit [www.proquest.com](http://www.proquest.com).

## **Pyrotek Inc.**

**#301**

**Spokane, Washington**

**[www.pyrotek-inc.com](http://www.pyrotek-inc.com)**

From concept to casting, Pyrotek partners with you to improve process performance through enhanced melt quality and metal processing. Pyrotek's technical experts are experienced in every aspect of aluminum production, from primary and secondary smelting, to holding, degassing, filtration and casting. Pyrotek's Metallurgy and EMP Technologies divisions provide products and services that improve productivity, reduce energy consumption, increase metal recovery and improve product quality. As your supply partner, Pyrotek helps you utilize advancements in technologies and products to better your bottom line. Visit Pyrotek at TMS booth #301 to discuss how Pyrotek's solutions can improve your aluminum process.

## **Resco Products**

**#103**

**Pittsburgh, Pennsylvania**

**[www.rescoproducts.com](http://www.rescoproducts.com)**

Founded in 1946, Resco has served its markets with specialized refractory products ever since. Pressed, monolithic and shapes, painstakingly engineered by Resco's team of engineers, are products that deliver exactly what they promise. Greater dependability, longer application life, easier installation, lower energy cost, lower maintenance costs, reduced downtimes and greater productivity. And that's just the beginning. At Resco we're constantly engineering even better refractories that do more, do it better and do it at a lower cost. Resco, for the long run!

## **Rex Materials Group**

**#533**

**Fowlerville, Michigan**

**[www.rexmaterials.com](http://www.rexmaterials.com)**

Rex Materials has emerged as a world leader in helping our customers solve their heat containment problems. We specialize in developing and delivering products that solve specific customer needs utilizing our custom engineered high temperature material systems and refractory products. Our materials include Pyrolite® ceramic fiber, FUSIO2N™ fused silica and Pyroform™ refractory. Rex Materials has two manufacturing facilities along with a separate design, tooling and prototype center. We have a team of engineers, designers and material scientists ready to help you solve your heat dilemma. From high temperature insulation to molten metal handling systems to specialty heaters, we deliver solutions.

## **Riedhammer GmbH**

**#121**

**Nuernberg, Germany**

**[www.riedhammer.de](http://www.riedhammer.de)**

Since 1925, Riedhammer GmbH has specialized in the design and construction of high productive, state-of-the-art ring pit furnaces for baking of high quality anodes and cathodes for the aluminum industry, as well as electrodes for the steel industry. More than 112 furnaces, in 27 different countries, have been built or modernized based on this concept. Riedhammer also supplies the pertinent equipment for the aforesaid furnaces like the Auto Firing System for a wide range of fuels, waste gas treatment systems, tending cranes and conveyors, and provides outstanding product quality, maximum fuel efficiency, reliability and world-class environmental friendliness in an affordable way.

## **Rigaku**

**#815**

**The Woodlands, Texas**

**[www.rigaku.com](http://www.rigaku.com)**

Rigaku Americas Corporation provides the world's most complete line of x-ray diffraction and X-ray fluorescence instruments. Instrumentation includes: the MiniFlex™ II benchtop XRD and Primini® WDXRF systems, the modular Ultima IV and SmartLab® multi-purpose diffractometer systems, and the ZSX Primus WDXRF spectrometers with mapping capabilities, in both tube-above and tube-below optic configurations. Family owned since 1951, Rigaku has been dedicated to providing innovative x-ray solutions to its worldwide academic, government, and industrial customer base.

## **Rio Tinto Alcan**

**See our ad on page 4 of JOM!**

**#309**

**Montréal, QC Canada**

**[www.alcan.com](http://www.alcan.com)**

Rio Tinto Alcan is the global leader in aluminum with large, long-life, low-cost assets worldwide, a strong portfolio of growth projects and access to significant bauxite reserves, competitive alumina refining, low-cost hydro power, leading smelting technology, and a diverse talent pool of 73,000 employees, including joint ventures, in 61 countries and regions worldwide. Rio Tinto Alcan—one of Rio Tinto's product groups—is well positioned to meet and exceed its customers' needs and is deeply committed to ensuring the economic environmental and social sustainability of the communities in which it operates.

## **Ross Controls**

#625

Troy, Michigan

[www.rosscontrols.com](http://www.rosscontrols.com)

Backed by more than 85 years of experience, Ross Controls is a global manufacturer of reliable pneumatic control products for the aluminum industry. Specializing in safety, crustbreaking, feeding and energy savings, Ross has offices worldwide to serve the aluminum industry. Ross has an established reputation for product innovation and product reliability in the harsh smelter environment. As an active partner-in-productivity, Ross engineers work closely with each smelter to solve problems and optimize air solutions.

## **Sefar Filtration Inc.**

#130

Depew, New York

[www.sefar.us](http://www.sefar.us)

Sefar is a worldwide leader and a trusted source for replacement filtration media and screening products for the mining and refining industry.

## **SELEE Corporation**

#501

Hendersonville, North Carolina

[www.selee.com](http://www.selee.com)

SELEE Corporation, born as a division of an international aluminum company, introduced ceramic foam filters of SELEE structure as a medium for filtering molten aluminum in the 1970s. SELEE immediately established a reputation as the world leader in aluminum melt treatment and filtration technology and for ceramic material development and innovation. SELEE Corporation is dedicated to new product development, continuous improvement and innovation, always building on its strong background in the aluminum industry. SELEE is key to achieving the highest levels of metal cleanliness and quality.

## **SenTech Precimeter Inc.**

#805

Tempe, Arizona

[www.precimeter.se](http://www.precimeter.se)

Sentech Precimeter Inc. develops, markets and manufactures equipment for metal level control in non ferrous cast houses. These systems can be used in a variety of applications such as level control for mold and head box, level control for through and launder, and furnace tilt control. Sentech Precimeters digital camera level control system safeguards the quality of the casting and the purity of the alloy at every stage from smelting to final pouring. The sensor and actuators combined with a controller form a complete control system for your casting needs.

## **Sente Software/Thermotech Ltd.**

#231

Guildford, Surrey, United Kingdom

[www.sentsoftware.co.uk](http://www.sentsoftware.co.uk)

We offer materials-focused software products for modeling the behavior and properties of complex alloys. The thermodynamic databases produced by Thermotech set the standard for the prediction of equilibrium and non-equilibrium structures in multi-component commercial alloys. Our latest product, JMat-Pro, is a unique software program for predicting phase transformations, physical/mechanical properties and solidification properties for complex alloys. It provides fast and robust calculations that have been extensively validated to ensure sound predictions of the properties. Our software combines industrial relevance with realistic physical models and user-friendly interfaces that work with "real" materials which are multi-component in nature and exhibit complex behavior. [www.jmatpro.com](http://www.jmatpro.com).

## **Shenzhen Aida Aluminum Alloys Co. Ltd.**

**#809**

**Shenzhen, Guangdong China**

**[www.aidalloys.com](http://www.aidalloys.com)**

Shenzhen Aida Aluminum Alloys Co., located in Shazui Road, Futian district, Shenzhen, Guangdong province, which was established in 1991, has two plants in Nanhai City and Sihui City. Aida has more than 18 years of experience in the nonferrous alloy industry, offering Tibors Rod (aluminum titanium boron), aluminum alloying additives, aluminum master alloys, Fluxes agent. As ISO9001 certified supplier of auxiliary materials, Aida researches, develops and produces auxiliary materials for the aluminum smelting industry. By close cooperation with famous universities and research institutes, Aida not only owns its Know-How technology but also has good manufacturing facilities, which were provided by many domestic and international companies. Our core product is AlTiB grain refining agent, which is researched and developed by cooperation with a university. Its characteristics are high efficiency, heredity, clean and stability. Our alloying additive has been exported to Alcoa.

## **Shimadzu Scientific Instruments, Inc.**

**#344**

**Columbia, Maryland**

**[www.ssi.shimadzu.com](http://www.ssi.shimadzu.com)**

Shimadzu, one of the world's largest manufacturers of scientific, analytical, and environmental testing equipment, will show a wide range of hardness testers and tensile testers for both static and dynamic testing. Shimadzu provides every type of instrument for destructive and nondestructive testing and composition analysis.

## **SLM Company, Ltd.**

**#126**

**Incheon, Korea**

**[www.alloys.com](http://www.alloys.com)**

SLM Company, Ltd., is a leading manufacturer of aluminum alloys with various forms such as waffle, ingot, rod, coil, cut rod, castcut and plate. We are specialized in grain refiner (AlTiB alloy) and modifier (AlSr) alloys. And we are very happy to introduce our AlSr rods in coil produced by very special and new technology. Please visit us and have a look!

## **SMV AS**

**#720**

**Skaanevik, 5593, Norway**

**[www.smv.as](http://www.smv.as)**

At TMS 2008, SMV AS will present new equipment and systems for the aluminium industry for improved environment, efficiency

and economy. For potrooms: special crushers and cooling lines for hot grabbed bath from the cells; special vehicles for transport of anode pallets, metal crucibles and potshells; vacuum cleaners, cell service wagons, spike removal machines, cell cavity cleaners, cell feeders, anode changers, etc. For cathode service shops: semiautomatic potlining machines. For cast house: PPM-purification of potroom metal by automatic skimmers and metal purification stations.

## **Starcyl Cylinders/MAC**

**#203**

**Champlain, New York**

**[www.starcyl.com](http://www.starcyl.com)**

Manufactures of air cylinders and solenoid valves for the aluminum industry.

## **STAS**

**#609**

**Chicoutimi, QC Canada**

**[www.stas.biz](http://www.stas.biz)**

STAS, based in Quebec, Canada, continues to develop degassers, filters and flux injectors for the aluminium industry following 25 years of successful applications in more than 30 countries worldwide. STAS is well-known for its automated equipment used in metal treatment for both primary and secondary plants. For example, there continues to be a need to reduce alkalines in crucibles (TAC); to remove hydrogen and inclusions from molten metal in casting centres, with or without chlorine. Available from STAS are automated hot and cold crucible cleaning machines, and automated siphon tube cleaners, and a new development is an automatic but analyser system.

## **Stellar Materials Inc.**

**#700**

**Tarpon Springs, Florida**

**[www.stellarmaterials.com](http://www.stellarmaterials.com)**

Stellar Materials is the manufacturer of Thermbond(r) Refractories and Phoscrete(r) Concretes. Our refractory formulations are nonwetting and heat up rapidly. Both our concretes and refractories are fast setting and bond permanently to existing substrates, thanks to our patented binder technology.

## **Taylor & Francis Group/CRC Press**

#819

**Boca Raton, Florida**

[www.crcpress.com](http://www.crcpress.com)

Take your research skills to the next level with Taylor and Francis Group/CRC Press, publisher of the Steel Heat Treatment Handbook, Second Edition. As a leading publisher of technical references and textbooks in materials science, CRC Press is proud to introduce a wide range of titles, from minerals processing and primary metals production to basic research and the advanced applications of materials. Visit our booth to see the latest books in metals and alloys, polymers, composites, biomaterials, electronic materials and nanomaterials, and take advantage of our sales: 15 – 25% off, and specials: – 50% off!

## **Techmo Car**

#743

**Limena, Italy**

[www.techmo.it](http://www.techmo.it)

Over the last 41 years, Techmo has been devoted to the solution of technical problems connected with the aluminium industry. Among the most significant machines produced by Techmo are anode changers, tapping trucks, feeder vehicles, crust breakers, a wide range of heavy duty transporters and the most up-to-date furnace tending vehicles. Techmo is also supplying to aluminium company fixed plants, such as anode butts cleaning stations and ladle cleaning stations, taylor-made equipment and a wide range of services. All of Techmo's products and services propose new, environmentally friendly and cost-effective solutions to aluminium producers.

## **The Green Anode Expert**

#841

**Basel, BS Switzerland**

Consultant for Green Anode Technology and Production.

## **Thermal Ceramics**

#507

**Augusta, Georgia**

[www.thermalceramics.com](http://www.thermalceramics.com)

Thermal Ceramics, a worldwide leader in refractory and high temperature insulation technology, offers solutions for the most demanding thermal management challenges. We offer a wide range of innovative products for aluminum industry applications in carbon bake furnaces, electrolytic pot cells, melter/holder furnaces and molten metal transport. Recognized brand names include Superwool® 607® and Superwool 607HT® soluble fiber Blanket/Strip/Bulk/Paper/Board; Tri-Mor® Albond® and Alcast®, Kaocrete® and

Kaolite® Castables; K® and JM™ Insulating Firebrick and Mortars; TR-19®/TR-20® Structural Board Insulation; Kaowool® Vacuum Formed Boards and Shapes; BTU-Block™ Microporous Insulation; Kaowool® Paper and Felts; and Pyro-Bloc® Weld-On Modules.

## **Thermcon Ovens BV**

#804

**Geldermalsen, The Netherlands**

[www.thermcon.com](http://www.thermcon.com)

Thermcon Ovens B.V., a member of the Otto Junker Group of companies, is a supplier of the complete state-of-the-art cast house package for the production of aluminium extrusion billets, rolling slabs and foundry ingot. The delivery program for the cast house comprises: charging machines, skimming machines, melting and holding furnaces, launders, casting machines, homogenizing furnaces and billet sawing systems. Recycling furnaces for contaminated aluminium scrap are also available. Thermcon Ovens B.V., together with other members of the Otto Junker Group, supply pusher furnaces, heat treatment plants for aluminium strip, etc., and Elhaus equipment for around the extrusion press. Unique one-stop shopping is available to the aluminium industry.

## **Thermo-Calc Software**

See our ad on page 5 of *JOM!*

#444

**McMurray, Pennsylvania**

[www.thermocalc.com](http://www.thermocalc.com)

Thermo-Calc Software is a leading developer of software and databases for calculations involving computational thermodynamics and diffusion controlled simulations. Thermo-Calc is a powerful tool for performing thermodynamic calculations for multicomponent systems. Calculations are based on thermodynamic databases produced by expert evaluation of experimental data. Databases are available for steels, Ti, Al, Ni-superalloys and other materials. Programming interfaces are available which enables Thermo-Calc to be called directly from in-house developed software or MatLab. DIC-TRA is used for accurate simulations of diffusion in multicomponent alloys. Applications include: homogenization of alloys, microsegregation during solidification, coarsening of precipitates, and welding.



## Thermo Scientific Niton Analyzers

#107

Billerica, Massachusetts

[www.thermo.com/niton](http://www.thermo.com/niton)

Thermo Scientific NITON® XRF analyzers are purpose-built for the most demanding customer applications. With the simple pull of a trigger, the XL3 800 Series provides the fastest alloy grade identification and composition analysis of metal alloys ever performed with a handheld XRF analyzer – typical time is less than two seconds. For immediate, nondestructive, laboratory-quality chemical analysis of aluminum and titanium alloys, as well as nickel alloys, superalloys, stainless steel and more, the NITON XL3t 900 Series, with its unique helium purge measurement head, all but eliminates the need for OES instrumentation in the field for analysis of magnesium, aluminum and silicon.

## Thermo Scientific - Scientific Instruments

#106

Madison, Wisconsin

[www.thermo.com/elemental](http://www.thermo.com/elemental)

We offer a full line of Thermo Scientific optical emission and x-ray spectrometers. OES continues to be the reference technique for direct analysis of solid metallic samples. Our systems are designed to meet your specific requirements whether you are working in a small cast iron foundry or in a large aluminum smelter. The unmatched combination of accuracy, high speed, precision, stability and reliability have made it an indispensable tool for production of quality metallurgical products. Using state-of-the-art x-ray collection techniques, x-ray fluorescence and x-ray diffraction products from Thermo Fisher Scientific provide elemental composition and structural information from a variety of materials.

## Thorpe Technologies Inc.

See our ad on page 25 of JOM!

#308

Whittier, California

[www.thorpetech.com](http://www.thorpetech.com)

Thorpe Technologies Inc. designs and builds custom industrial furnaces, delacquering systems, thermal oxidizers and related thermal technology equipment. Thorpe's aluminum product line includes: 1) Apros-based technology delacquering systems; 2) scrap drying systems; 3) rectangular melting furnaces; 4) side-well melting furnaces; 5) dry hearth melting furnaces; 6) round, top charge melting furnaces; 7) tilting melting furnaces; 8) rotary melting furnaces; 9) stationary holding furnaces; 10) tilting holding furnaces; 11) batch homogenizing furnaces; 12) continuous homogenizing furnaces; 13) charging machines; 14) ladle pre-heaters; 15) ladle tilt stations and transfer cars. Thorpe Tech-

nologies Inc. is headquartered in Whittier, California; telephone (562) 903-8230. Thorpe Technologies engineers and builds mill duty industrial furnaces and thermal processing equipment.

## Tri-State Refractories

#128

Evansville, Indiana

Tri State Refractories is a full service refractory contractor serving the aluminum industry. Our work includes melting furnaces, pot lining, carbon bake furnaces, rotary furnaces and boilers.

## Urja Products PVT. Limited

#713

Odhav, Ahmedabad India

[www.urjafabrics.com](http://www.urjafabrics.com)

For over three decades, Urja has been in the line of weaving technical textiles. Today Urja is the leading supplier to aluminium companies in India and also exporting filter fabrics to more than one dozen countries. Besides filter fabrics of several mesh sizes, Urja is competent and capable to fabricate ready-made articles such as spout socks, launder socks, launder bags, channel bags, combo bags, funnels, launder insulating lids, etc. Urja is an ISO 9001/2000 company. The items that Urja manufactures and supplies to cast houses and smelters are characterized by accuracy, reliability and consistency. Urja employs in its stitching department 50 women who are dedicated in their work as well as properly trained. Competitive pricing, coupled with consistent quality, encourages Urja to gain prominence in the international market. With its long experience, Urja is set to dominate the world market for filter fabrics.

## Vulcan Refractories, Ltd.

#222

Cheadle Staffs, England

[www.vulcanrefractories.com](http://www.vulcanrefractories.com)

Vulcan Refractories have a long term commitment to the supply of quality refractory and industrial ceramic materials. Established in 1969, the company has over 30 years experience in the manufacture of high duty refractory materials for use in high temperature or aggressive atmosphere applications. The company's product range is based around three main material groups: silicon carbide, alumina and mullite, and zirconia. Production facilities allow shaped materials to be produced in cast, pressed or isostatically pressed formats. Major aluminum linked applications are: primary aluminum – silicon nitride bonded silicon carbide blocks for the lining of primary reduction cells; secondary aluminum – silicon carbide, alumina and aluminum titanate-based shapes for applications in flow control, launder and furnace tapping areas; and aluminum powder – zirconia and alumina flow control nozzles.

## **Wagstaff Inc.**

See our ad on page 24 of *JOM!*

**#521**

**Spokane, Washington**

**[www.wagstaff.com](http://www.wagstaff.com)**

Since 1946, customers with exacting quality standards have turned to Wagstaff for aluminum solidification technology. Today, with customers in more than 52 countries, Wagstaff has earned international recognition as the aluminum industry's leader in direct chill casting equipment. For more details on Wagstaff, visit our booth (#521), contact us at [info@wagstaff.com](mailto:info@wagstaff.com) or visit [www.wagstaff.com](http://www.wagstaff.com).

## **Wahl Refractories**

**#623**

**Fremont, Ohio**

**[www.wahlref.com](http://www.wahlref.com)**

Wahl Refractories has grown to be recognized throughout the world as an innovative supplier for engineering, manufacture and installation of refractory specialties. Since 1921, Wahl has continued to expand our product line to service the aluminum, steel and iron, cement, copper, foundry, lime and mineral processing industries. Wahl is an industry leader by developing and introducing new and innovative products to the aluminum industry such as SIFCA(R), MegaBRIX(TM), WalMaxXx (TM), Freedom3 (TM), WalCrete, WalCast, X-Cel Cast, Command and UltraCommand. These products provide aluminum producers with the most durable refractory maintenance lining systems in the marketplace. Wahl Refractories is the largest manufacturer of complete precast furnaces.

## **Webb Aluminium Group**

**#725**

**Farmington Hills, Michigan**

**[www.jerviswebb.com](http://www.jerviswebb.com)**

Webb Aluminium Group is comprised of Jervis B. Webb Worldwide Company, Webb Australia and Webb-India. It has more than 50 years experience providing turnkey systems for aluminium carbon plants. Our global workforce and advanced technology make us a leading provider in the industry. Whether you're constructing a new facility or upgrading an existing plant, Webb Aluminium Group will work with you to design a system that meets your specific needs. We offer cost-effective products, including processing equipment, material handling systems and integrated controls for your entire carbon plant – from the paste plant to the baking furnace to the rodding shop.

## **Weir Minerals Netherlands BV**

**#812**

**Venlo, Limburg Netherlands**

**[www.weirminerals.com](http://www.weirminerals.com)**

The GEHO pumps handle a wide range of slurry applications. Extensive know-how and experience has been gained in high duty applications at elevated temperatures, high pressures, viscous slurries and a corrosive and abrasive environment. Examples are: nickel autoclave feeding, Rio Tuba - Philippines; bauxite digester feeding, Chalco – China; bauxite transportation pipelines, Paragominas – Brasil. A lot of know-how and experience has been build up on slurry technology in the in-house laboratory and testing facilities. The gained in-house slurry technology and many years of experience allows an out-of-the-box approach which offers the design of the entire system, for example, high concentrated slurry disposal for red mud (Alcan Pechiney).

## **York Linings International Ltd.**

**#832**

**Daphne, Alabama**

**[www.yorklinings.com](http://www.yorklinings.com)**

Refractory engineers and installers, York Linings International operates worldwide, providing refractory design, supply and engineering services for a wide range of industries. In the aluminum industry, the company provides refractory installation for potlines, carbon bake furnaces, melting and holding furnaces, together with cathode sealing services.

## **Zircar Ceramics, Inc.**

**#711**

**Florida, New York**

**[www.zircarceramics.com](http://www.zircarceramics.com)**

ZIRCAR Ceramics, Inc., Florida and New York, United States, is a manufacturing and International marketer of a wide range of cast house consumables which include: castertips and nozzles for twin roll and belt continuous casters; ceramic foam and fiberglass cloth filters; vacuum-formed ceramic fiber and non-RCF fiber shapes; ceramic fiber textiles - rope, tape, cloth; ceramic fiber and non-RCF paper and blankets; precision CNC machined and precast refractory; baffles, floats, dams; microporous insulation fabricator.

W  
X  
Y  
Z